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The Oil Man's Calendar

OCT. 6– 9	National Safety Congress, Chicago.
9–11	Texas Mid-Continent Oil & Gas Association, Beaumont.
16–17	American Association of Petroleum Geologists, Pacific Section, Los Angeles.
16–18	American Institute of Mining & Metallurgical Engineers, Petroleum Division, Dallas.
20–22	National Stripper Well Association, Tulsa.
20–22	Independent Petroleum Association of America, Tulsa.
29–30	American Institute of Mining & Metallurgical Engineers, Petroleum Division, Los Angeles.
31	California Natural Gasoline Association, Los Angeles.
NOV. 2– 7	American Petroleum Institute, Annual Meeting, San Francisco.
13–14	American Association of Oil Well Drilling Contractors, Annual Meeting, Dallas, Texas.
DEC. 3	New Mexico Oil & Gas Association, Artesia.
5	Oklahoma Stripper Well Association, Tulsa.

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The Changing Panorama

Inopportune Time For Propaganda

East Coast Problem Big Enough Without This Additional Burden

One merely has to recount the many things that the oil industry is doing to avert an oil shortage on the Atlantic Seaboard to realize that no effort or expense has been spared to meet the emergency created by the diversion of tankers to Britain. Among other things, the use of tank cars to haul crude and refined products to Eastern points is increasing rapidly despite the higher costs involved. Yet powerful groups continue to spread propaganda that the East Coast situation can be cured simply by utilizing a reported 20,000 to 24,000 "idle" tank cars. Unfortunately, such propaganda has been given widespread publicity and has been accepted as fact by those in high places.

John J. Pelley, president of the Association of American Railroads, a group that has consistently opposed the construction of pipe lines, some of which needed only connecting links under railroad rights-of-way to help solve the East Coast problem, testified before the Senate subcommittee investigating the oil shortage early in September that there were 20,000 tank cars available with a sufficient capacity to move 200,000 barrels of petroleum a day into Eastern markets. He did not give specific figures as to where such cars were located.

Ralph K. Davies, deputy petroleum coordinator, refuted Pelley's figures as being computations based on a theoretical performance that might be accomplished by increasing efficiencies of cars currently in use. At the same time reports were current in the industry that difficulty was being experienced in securing a required number of cars. However, the Senate subcommittee accepted the railroad association's figures and was willing to rest its case on an obvious bit of propaganda.

Later the Subcommittee on Tank Cars, of the Transportation Committee, District No. 1, appointed by the petroleum coordinator and comprising oil-company traffic men, made a complete check of tank car owners and found that only slightly more than 5000 cars were actually idle and available for East Coast service. In the face of this specific information Pelley appeared before the Senate subcommittee again last week and stated that more than 24,000 tank cars were available if the oil companies would use them.

It would seem that the East Coast problem is big enough in itself without the additional burden being placed upon the oil industry of contending with propaganda merchants.

Illinois Not Bad Boy Now . . .

Illinois, the erstwhile villain among leading oil-producing states, with a record of spoiling markets by big production spurts, now takes the role of hero for the same actions. Times change, and the latest increase in Illinois output is coming to the rescue of oil-thirsting East.

In the absence of inadequate tank ships to maintain the enormous stream of oils by boat from the Gulf Coast to the Atlantic seaboard, the iron horse of the rails has been summoned to haul in crude and refined oils by tank car from the west; and the closer the supply, the quicker the round trip for a car, and the more oil brought in.

Accordingly, Illinois crude has been avidly gathered and put aboard east-bound tank cars; and the Illinois production curve, formerly on a steady decline, has turned upward and continues to rise.

In May the state was producing around 325,000 barrels daily. Its wells are now turning out 90,000 barrels a day more than that amount, having averaged 415,750 barrels daily in the week ended September 27.

One company alone, Standard Oil Company of New Jersey, is now rail-shipping 34,000 barrels daily of Illinois crude to the East Coast, plus 4000 barrels of Kentucky crude.

Question of Steel Causes Confusion

Definite Priority Plan Would Let Industry Plan Accordingly

To date there has been a lot of talk about the oil industry being expected to get along with 30 percent less steel consumption. This has raised the question of priorities and the prospects of obtaining equipment in the future. So far no definite program has been announced as to how the industry should operate to achieve the goal of reducing steel requirements. Wider well spacing has been mentioned repeatedly, but as yet orders of this nature have not been issued. This lack of any sort of established program has created a terrible state of confusion. Neither oil operators nor equipment manufacturers have any idea of what to do. Consequently, the industry continues to try to do business as in the past, drilling and producing as each individual wishes.

This situation will continue until something definite comes out of the series of meetings that have been held recently. It is to be hoped this will not be far in the future. If given a definite program that it should follow, the industry can then plan accordingly. This would be much more helpful to the industry and national defense effort than the current unsettled, confused condition.

Spacing by Priority . . .

Apparently the various state oil conservation and regulatory boards are to be relegated further to the background by the Office of Petroleum Coordinator. Recent developments, for instance, would indicate OPC proposes to "by-pass" state agencies in the matter of well spacing — controlling it through steel priority systems rated upon the number of wells to be drilled in new fields.

Heretofore the state bodies have conducted hearings and adopted rules when a new reserve was opened. Now, operators must request steel priorities from OPC in

order to get materials for developments. Priority ratings will be based upon the number of wells to be drilled, with the OPC leaning to as few as possible. Thus the spacing patterns are likely to be much greater than heretofore, perhaps one well to 40 or perhaps 80 acres. After developing fields on this pattern, lower priority ratings might be given for additional closer drilling; but as long as the steel shortage exists it is unlikely that the industry will find it easy to obtain the necessary equipment for such operations.

Another Priority Use . . .

Use of second hand material in the oil fields may not long continue to escape some form of regulation by the Office of Petroleum Coordination. It is likely that such regulation will be enforced through the same weapon OPC apparently is planning to employ to achieve other ends—steel priorities. In this instance, requests for steel priorities might be rated upon a basis of whether second-hand material was being used by the consumer.

Attention OPC is giving to the second-hand equipment situation in the oil industry is the result of several conditions. Because of the difficulty of obtaining some pieces of equipment, especially tubular goods, casing and tubing are being pulled from many stripper wells, which is a practice frowned upon whenever these wells are producing any volume of oil. Creating further disapproval of the use of salvaged material is the selling of some casing and tubing at premiums of 7 to 25 cents per foot above prices for new goods. It is understood some concerns have purchased used materials at high prices for two principal reasons: (1) in the hope of getting priority ratings on the necessary few additional items needed to complete a well, and (2) to save stocks already accumulated. Both are undesirable to OPC.

That some action of this kind to regulate use of salvage material may be taken by OPC is indicated by a letter Robert E. Allen, director of production, has written to Grady Vaughn, director of production for District 3, which states in part:

"While regulation of used supplies to the same extent as new supplies would be desirable, such equality in degree of regulation would probably be quite difficult to achieve because the sources and movement of used supplies are so inconstant.

"Furthermore, used materials may not always change hands in the re-claiming and re-use. After discussing the question here [Washington] briefly, it seems possible that regulation of used supplies might be indirectly attained through regulation of new supplies. For example, if a given field had received a certain rating for its approved development and operating plan, then there seems nothing to prevent a re-rating of the particular operator so as to place him in a less favorable position to obtain new supplies, of which there are always some required even where used materials are largely employed.

"Furthermore, the inclusion of used supplies in statements of inventory position may also be required, and this would automatically provide the basis for limiting the flow of new materials to those possessing stocks of used materials."

East Texas, Age 11; Baku, 60

America's greatest oil field, East Texas, was 11 years old at 8 o'clock last Friday evening, October 3.

Scouts say the field has produced, so far this year, a total of 94,450,951 barrels from January 1 to September 24. Added to Bureau of Mines figures on earlier production, this indicates cumulative output of 1,664,780,171 barrels, which is far more than the production of any other field in the United States, including Oklahoma's Seminole area (over a billion barrels) and California's Midway - Sunset (about 900,000,000).

East Texas attained a peak of 26,061 oil wells on the Texas Railroad Commission's official tabulation about mid-August, 1939, and in spite of completions every week, currently has only 25,899 producers listed on the corresponding official report, abandonments having exceeded completions.

East Texas has a productive area of about 133,000 acres, and is expected to produce ultimately between 4 and 5 billion barrels.

Ahead of East Texas in past production and comparable in ultimate production is Russia's Baku district in the Caucasus. However, there is very little similarity between the two great fields. East Texas produces from one continuous sand, the Woodbine, of Upper Cretaceous, that spreads over large parts of 5 counties. All fields of the Baku district have a combined productive area of less than 12 square miles, and production is from multiple sands of the Pliocene. From first commercial development about 1880 to 1930, or in the 50 years before East Texas was discovered, the Baku district had produced 2,000,000,000 barrels from an area of 6170 acres, an average recovery of 324,000 barrels per acre. Subsequently, the area has produced over one half billion barrels more. Total thickness of the Baku producing series, the Pliocene "Oil Measures," is 6000 feet, 75 percent sand and the rest shale. Originally, the actual pay horizon comprised about 2000 feet net oil-bearing sand. There are about 30 separate pay zones, although only a few are prolific at any one place, except at Bibi-Eibat, where saturation is extraordinary. Miocene and Oligocene formations below the Pliocene are expected to produce important quantities of oil, through drilling to 5000-7000 feet. Considering deeper drilling possibilities, Baku is expected to produce yet 2 to 3 billion barrels.

Subsidy for Wildcats . . .

Rumors have bobed up in some quarters that the government through the coordinator might evolve a plan for subsidizing wildcat drilling and other exploration work on the premise that the search for new reserves should be stimulated in the interest of national defense. It is inconceivable that anyone even remotely familiar with the situation would suggest such a move.

The industry has demonstrated its ability to find and develop new sources of supply well in advance of requirements. The discovery rate for the past several years has risen steadily and figures for 1941 indicate that there is no lessening in pace.

Given the necessary equipment and supplies and a fair market, the industry will contnue its exploratory efforts unabated and without outside help.

Washington Roundup

Ickes heatedly refutes 20,000 idle tank car figure before a skeptical Senate committee . . . More stringent rationing under OPM control applied to Eastern states . . . Pennsylvania crude price boost approved . . . Tanker dispute looms

By B. F. LINZ, Washington Correspondent

RESURRECTION of the tank-car controversy between Coordinator Harold L. Ickes and J. J. Pelley, president of the Association of American Railroads, featured a week marked also by the adoption of a new formula for application of gasoline restrictions in the East and a drive to bring California into the conservation group.

Appearing before the Senate investigating committee at his own request, Ickes slung mud at Pelley, denouncing him as a lobbyist; charged the railroads with misrepresenting the car situation in an effort to stymie the proposed Texas-New York pipe line, and declared emphatically that there is a shortage in the East.

Pelley, under oath, repeated his previous assertion that there are at least 20,000 cars and that the roads can bring in 200,000 barrels of oil a day, submitting a detailed survey to show just where the cars were located.

A feature of the hearing was the disclosure by the coordinator that he foresaw the present situation a year ago, and in a report to the President in July, 1940, urged that steps be taken immediately to guard against a shortage of transportation facilities along the Atlantic coast.

Ickes failed to convince the committee that the cars were not available, and the hearings closed with members expressing the belief that if the companies put the cars to work the shortage will be eliminated.

A new formula, with curtailment based on average demand for the three months from May 1 to July 31, and deliveries to customers based on October, 1940, takings so as to provide for seasonal and other requirements of local nature, was announced by OPM at the close of September.

For the past 10 days representatives of the oil equipment manufacturers have been meeting with various agencies in Washington to see if some means can be devised to overcome steel priority difficulties, which threaten to interfere with development work so essential for the oil industry to maintain its high rate of production. So far no announcement or indication regarding progress or lack of it has been made.

In a drive to prevent waste in California, Ickes called on the West Coast committees to develop methods of making most efficient use of oil and gas supplies, both then and in the Maloney hearings, denouncing the state for its failure to adopt conservation legislation.

Also featuring the week was an announcement that Humble Oil & Refining Company had turned the new Baytown, Texas, toluol plant over to the government five weeks ahead of schedule.

Hearing

Challenging the findings of the special Senate committee investigating the East Coast shortage, Coordinator Ickes on October 1 declared its "preliminary report" of last month has "gravely handicapped" his conservation program, and refused definitely to even consider abandonment of delivery restrictions.

Ickes made his position clear at a hearing before the Maloney committee marked by a vicious attack upon J. J. Pelley, president of the Association of American Railroads, for which he was vigorously rebuked by Chairman Maloney, a long-time personal friend of the association executive.

Pelley, said the coordinator, is a "lobbyist whose chief concern was to prevent the building of a pipe line" whose testimony that there were 20,000 idle tank cars is not to be credited.

Waiting patiently while Ickes read a 25-page statement and while other members of the committee questioned him, Chairman Maloney eventually got an opportunity to respond to his strictures on the railroad man.

Committee Critical

Pointing out that Pelley was the responsible executive of a responsible organization, Maloney told the silent coordinator that "I have complete confidence" in him, and added that while at the previous hearings he had asked that the coordinator's office, the railroad association and other interests involved report from time to time on the progress made in dealing with the shortage, Pelley was the only one who had done so.

Maloney put into the record a report from the railroad executive indicating that on the morning of September 27 there were 18,331 tank cars available in the hands of the railroads of the country. Ickes, both in a statement issued late last month and in his testimony before the committee, contended there were only 5192 idle cars although, the chairman pointed out, a report to the transportation committee for District No. 1 by the Union Tank Car Company showed that concern alone had 6640 cars available.

The coordinator, whose appearance before the committee was at his express request, also was subjected to criticism by Senator W. Lee O'Daniel of Texas, who read into the record the charges of J. A.

Smith, president of the Independent Petroleum and Consumers Association, Los Angeles, that Deputy Coordinator Ralph K. Davies was receiving his $57,500-a-year salary from Standard Oil Company as well as his $10,000 salary from the government.

The matter was broached at the last hearings of the committee, and it was explained by coordinator office officials that Davies had been on company salary while serving as a "dollar-a-year" man before the office received funds for operation, but was dropped at the beginning of August when he wnet on government salary.

O'Daniel also read a lengthy letter from the Eastern States Petroleum Company, complaining of inability to sell gasoline to major companies although it had a tanker of its own in which to make delivery. Ickes answered the implied criticism by asserting that the company used Mexican crude oil and the majors probably would not buy it because of the expropriation of their Mexican properties.

"The government of Mexico, I surmise, actually controls this refinery," he commented.

The Texas Senator also referred to charges that the coordinator's organization was made up largely of officers and employees of major oil companies, and that the independents and public were virtually without representation.

"I do not believe, if you had a plebescite of the independents, that you would find they had felt, in their dealings with me, that they had experienced anything but fair treatment," the coordinator retorted. "The opinion of the major companies is that I lean too far toward the independents."

O'Daniel brought up the question of the Texas-New York pipe line, pointing out that in 1940 the Reserve Natural Gas Corporation was chartered in Texas to build a natural gas line between the same destinations, of the same diameter and at the same cost as the line for which OPM last month refused a priority on steel pipe.

"We have no objection to furnishing the oil and will furnish the oil, and we have no objection to building oil lines to transport the oil," the Senator said, "but we are alarmed about whether this may later be used as a natural gas pipe line."

"I would like to make it clear that I am not interested, directly or indirectly, in any gas line to which this may conceivably be converted a number of years hence," Ickes replied. "But I am desperately interested in seeing that England, Russia and other countries get the gasoline and oil that they require and that we bring up to this area the fuel oil and gasoline we need to run on a normal basis, and I think it would be a pity to prevent the consummation of that plan by speculating what may happen 5 or 10 years from now."

In a final exchange with O'Daniel over the part played by the independents in the coordinator's organization, Ickes said he wanted to know more about complaining independents than their own representations of themselves. "There are independents and independents," he said.

Senator O'Daniel declared the shortage a "manufactured emergency" to secure the building of a pipe line, and expressed confidence that the railroads can meet the situation if the companies make use of the available tank cars.

With a current report from Pelley before the Maloney committee, the Coordinator's Office is making a survey of its own and in the near future is expected to file with the committee its views on the Eastern situation, showing, among other things, whether the curtailment orders and if the use of additional transportation facilities have resulted in any reduction in the drain on reserves.

Association Backs Ickes

On the other hand, Ickes' position was given the unqualified endorsement of the Atlantic Coast Oil Association's conference which, in a letter to President Roosevelt, charged the investigation was "biased" and urged him to support the coordinator's program.

"This conference suspects that the recent senatorial investigation of the oil shortage was biased, and the conclusions of the committee were reached without a full and intelligent consideration of vital facts, weather contingency, and requirements of national defense," it was declared.

The California oil situation is one of the worst in the country, Ickes asserted. "California and Illinois stand in a class by themselves for reckless waste of oil and natural gas."

In his formal statement, the coordinator took issue with the committee's conclusions in its preliminary report that unnecessary alarm was created as to the East Coast situation, that there is no shortage of transportation facilities, that the only shortage is one of stocks, that the situation can be quickly corrected and that present restrictions should be lifted.

Tank Car Shortage

The whole issue involved, he said, was whether there were sufficient tank cars available to make up any deficiency.

Ickes attacked the testimony of Pelley at length and while he admitted that Ralph Budd, chief of the transportation division of OPM, agreed with the railroad man at the time as to the availability of tank cars, asserted that Budd has since changed his position and now agrees with the coordinator's office.

That there are no cars available, he declared, was demonstrated by the efforts of Cities Service Oil Company to secure 1000 additional cars, which resulted in firm offers only for 160 cars.

"So there you have a drama in three acts," he said:

"Act I—Mr. Pelley blithely assures you that he can snap his fingers, and—presto—20,000 cars will be whisked onto sidings in the oil fields.

"Act II—An actual survey among owners of more than 147,000 cars shows that 5192 cars—not 20,000—are claimed by their owners to be available if they can be located.

"Act III—A major oil company asks for 1000 cars—not 5192—and can get only 160.

"I submit that this is not funny. Your committee has issued a report which has gravely handicapped the program of the petroleum coordinator's office, and the major findings of that report were predicated in large measure upon the so-called 'studied opinion and serious promises' of a man who has now been proven to have given testimony which was utterly without foundation—and I believe he knew it was without foundation.

Attacks Pelley

"The mischief which this man has done is incalculable, and I say this entirely without personal consideration."

The coordinator assailed the association head at length. "Mr. Pelley is an old hand at conniving to stifle any and all competition

for the railroads," he charged. "His efforts to wreck the oil trucking business in the Southeast were paralleled more recently by his attempt to block two petroleum pipe lines in the same region. Mr. Pelley was not even embarrassed when he admitted openly that his lobby successfully blocked the construction of the Plantation and Southeastern pipe lines until the Congress enacted the Cole Act, which overcame obstructions to rights-of-way.

"Yet when Senator Maloney asked him whether the railroads were opposing construction of the proposed crude-oil pipe line from Texas to the East Coast, Mr. Pelley managed to keep a straight face as he replied that he did not know of any such opposition."

However, he continued, "Mr. Pelley and his tank cars" are only one of the problems confronting the coordinator's office. "It just happens that they have gained a prominence altogether out of proportion to their importance, and so have obscured many of the positive and effective steps taken by this office to make up for the deficiency in oil transportation to the East Coast," he commented.

Ickes Foresaw

Outlining the "thirteen steps" which have been taken, Ickes disclosed that his first interest in the situation was not when he was appointed coordinator last May but more than a year ago when, at the instructions of President Roosevelt, he made a study of the available transportation facilities of the Atlantic Coast.

In a report made July 20, 1940, he said, he stated that "under normal conditions, the tanker fleet and other transportation facilities then serving the Atlantic Coast were adequate to meet the needs foreseen for 1940 and 1941.

"However," he added, "in this report I stated—and submitted figures to prove it—that transportation facilities to the East Coast would not be adequate if emergency conditions should develop. I stated that crude and heavy-oil inventories held on the Atlantic Coast during the first part of 1940 did not afford an adequate safeguard if there should be an interruption of tanker service as the result of an emergency. At that time—more than 14 months ago—I suggested that three things be done, namely, the building of a pipe line, the construction of additional tankers, and an increase of the reserve petroleum products in the East Coast by at least 3,600,000 barrels. I made very clear my belief that, under normal peacetime conditions, the building of a crude-oil pipe line from Texas to the East might not be economically sound but that, in the event of an emergency, it might be absolutely necessary.

"And so I suggested: Let's not wait until an emergency does develop before we do our preliminary work. Let's get busy right now and find out these things: If it becomes necessary to build a pipe line or pipe lines, will the necessary quantities of pipe and pumping equipment be available? Will there be available, in sufficient quantities, the equipment and personnel to lay the line or lines if needed? I suggested that, if the pipe lines were approved, they should be definitely classified as necessary to national defense, so that there would be minimum difficulties in rights-of-way, priorities and other considerations.

"These are facts of record. And, may I emphasize that these findings were presented to the President. They were not made public, for the specific reason that we did not want to cause alarm." This, he added, disposes of the charge that the coordinator created "unnecessary" alarm as to the situation.

Statistical Position

Strongly supporting the testimony given by Deputy Davies in his appearances before the committee, Ickes declared the cold facts about the situation are:

1. Not enough oil is now moving to this coast to supply all of next winter's already-known needs.

2. Not enough oil is moving to this coast to supply, in addition, almost certain increases in this need.

3. Not enough stocks are available in storage tanks on the East Coast to make up all of the difference between what we will need and what we will move in.

These facts, he said, are known, because:

A. Total stocks on hand on the East Coast have been running under the amount on hand last year by about 6,000,000 barrels.

B. Despite the smaller stocks on hand, the demand for all petroleum products has already increased 10 percent over last year.

C. The total amount of available transportation capacity now actually carrying oil to the East Coast is less than last year as a result of the assignment for defense purposes of a substantial part of this capacity normally used to haul oil to the East Coast.

D. The total volume of oil necessary for the East Coast in the winter is greatly in excess of summer needs since in the winter a heavy demand for domestic and industrial heating oils is superimposed upon a need for gasoline that declines only slightly.

"I have said that there was a shortage—and I mean as I have always meant, a shortage in transportation," he told the committee. "I still say that there is a shortage."

Aviation Need 120,000 Barrels

Outlining other problems of his office, the coordinator went into considerable detail with respect to the situation in aviation gasoline.

Present production capacity for 100-octane aviation gasoline is 40,000 barrels a day—the largest capacity in the world—but the problem is that of supplying as much as 120,000 barrels a day, he recounted.

"On top of our own needs, we have suddenly had to supply huge amounts of aviation gasoline in our role as the arsenal of democracy," he explained. "These orders, together with our own requirements, have outstripped our capacity. We are drawing too heavily upon our reserves. Likewise, we do not have sufficient capacity for producing the blending agents which must be used in manufacturing 100-octane gasoline.

"I have warned the industry that it must greatly increase its 100-octane capacity quickly. We are working with the industry and with Secretary Jones and the Defense Plant Corporation to evolve a program to construct new refineries for 100-octane. We are also seeking a better control of purchases. But new plants take many months to erect. Meanwhile, we must have gasoline. Mr. Davies told you that the Navy was having trouble in buying fuel oil for its ships and shore stations. I am not happy to tell you that it also has encountered difficulty in obtaining 100-octane aviation gasoline. One week, when the United States Navy, acting as Lend-Lease purchasing agent, asked for bids for supplying 600,000 barrels of avia-

[*Continued on page 58*]

Favorable Results Achieved in

Supplying the East Coast

By L. J. LOGAN, Associate Editor

WHILE debate continues as to the seriousness of the threat of an oil shortage on the East Coast during the fall and winter, the industry is supplying oils in unprecedented volumes to that region as well as the rest of the country, and it may be expected to continue to furnish record-breaking quantities to the East and to other parts of the country, unless additional heavy inroads are made into its facilities by tanker diversions.

This achievement of supplying materially increased demand with a greatly reduced tanker fleet, through increased efficiency of remaining ships and substitution of other means of transportation, has attested the ingenuity, resourcefulness, and dependability of the industry in time of emergency; and in the existing circumstances, the industry obviously cannot be blamed for any necessity heretofore or during the fall and winter of applying brakes upon the record-breaking demands for its products.

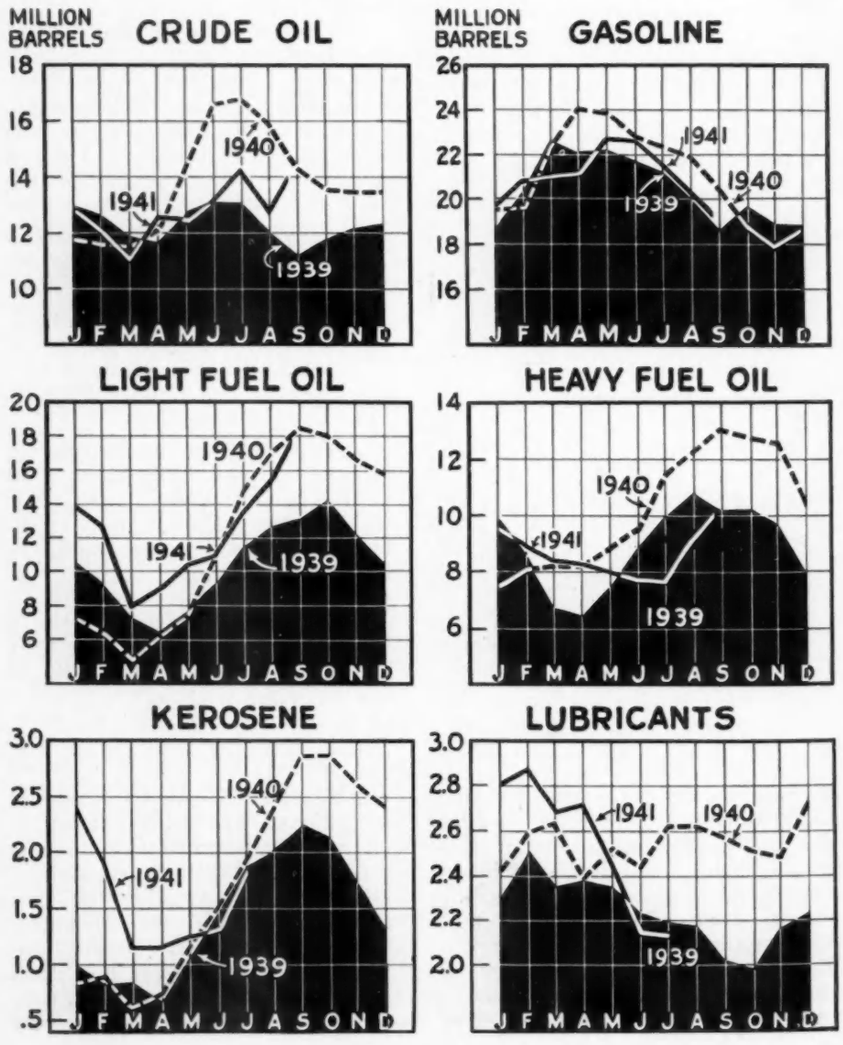
So far, the only restriction on consumption that has been deemed advisable has been the mild curtailment of deliveries of gasoline to Eastern service stations during August, September, and October, apparently amounting to less than 10 percent and leaving sales greater than a year ago; and no tightening of such curtailment is contemplated up to now by the oil coordinator's office.

Similarly, while conservation of heating oil is urged, no necessity is seen at present for extending restrictions on Eastern deliveries to include that product; and if the winter is not exceptionally severe, there may not be necessary, henceforth, for any official curtailment of heating-oil use.

On the other hand, it appears quite possible that discouragement of the use of residual, or heavy, fuel oil on the East Coast may be necessary, because of the scarcity of tankers. Eastern stocks of that product are nearly 20 percent lower than a year ago, while consumption is running nearly 20 percent higher; and to increase supplies would require use of ships urgently needed for bringing in heating oil and gasoline. However, use of the heavy fuel oil is more susceptible to curtailment than is consumption of most of the other products, as some users may without great inconvenience substitute coal. Only about 50 percent of the total use is inflexible, that is, not susceptible to convenient or economical

East Coast Stocks at End of Month

Inventories of crude, light fuel oil, and kerosene are about same as year ago. Stocks of gasoline, heavy fuel oil, and lubricants are smaller. Source of data: Bureau of Mines to July 31, 1941; August 31 and September 20, 1941, from American Petroleum Institute.

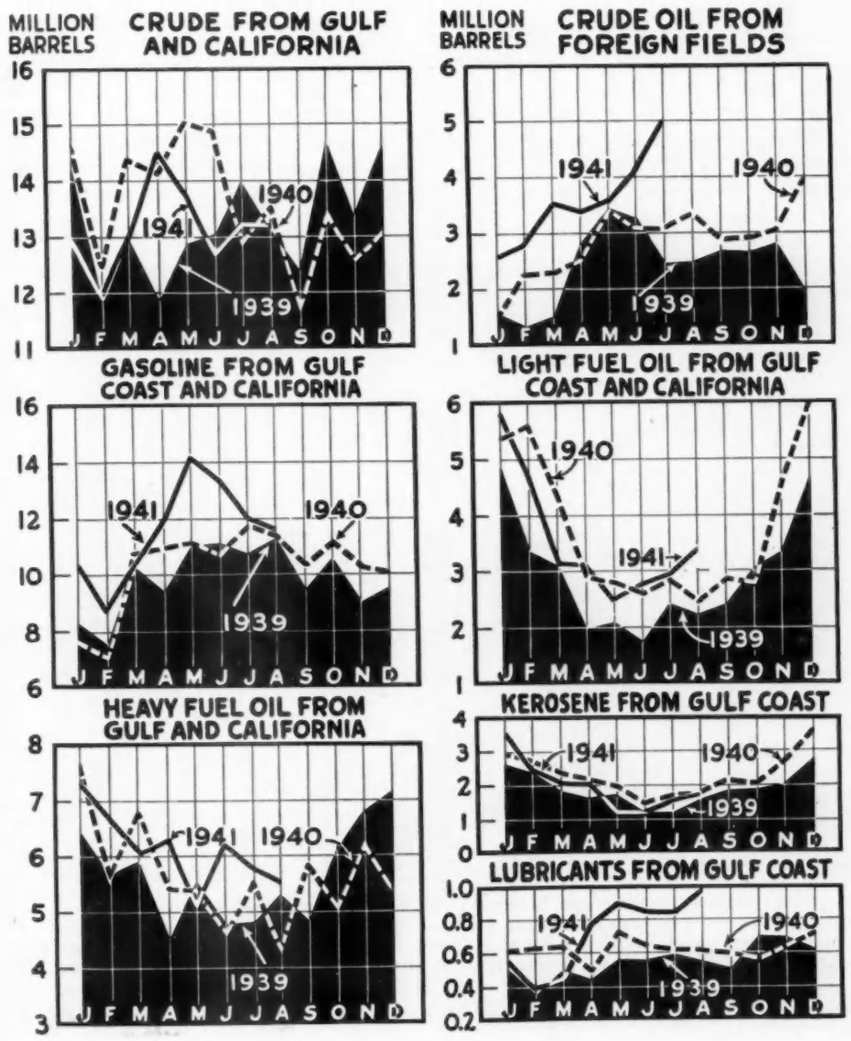


substitution, the inflexible users being ships, railroads now using oil, to some extent the oil companies, and some consumers who use the product for heating; flexible users being the gas and electric power plants and most industries, which normally vary their consumption as the price of residual fuel oil goes up or down. Already, prospective Eastern purchasers are having difficulty in contracting for supplies of the heavy fuel oils for fall and winter delivery, and scarcity of supplies doubtless will continue until the shortage of tankers is alleviated.

Considerable relief has been gained through use of tank cars, and much more doubtless will be realized. Apparently, the chief deterrent has been the unwillingness of government authorities as well as oil companies to face the fact that the desired objective might be gained—for a price: the price of higher transportation charges by rail than by tanker, which eventually would have to be passed on to the consumer. Finally, however, there has been such a facing of facts by both the government and the industry, with the result that the oil companies have agreed to make maximum possible use of tank cars, with the understanding that price control authorities will approve any necessary increases in prices to compensate for the higher transportation costs.

Monthly Receipts at East Coast Ports

Crude coming in from foreign fields in exceptionally large volumes and from Gulf Coast at about same rate as year ago. Receipts of gasoline, light fuel oil, heavy fuel oil, and lubricants from Gulf Coast greater than last year, and kerosene receipts normal. Moreover, Eastern receipts now include lately inaugurated pipe line and rail movements, which are not incorporated in charts. Source of Data: Bureau of Mines.



Aside from the physical considerations, increased rail movement of oils to the East, with due adjustment of prices, appears practical from the standpoint of the possibilities afforded for a natural, economic influence on demand itself. Required to pay more per gallon for gasoline, consumers might of their own volition cut down on their consumption and thus reduce the apparent scarcity.

Attesting that the East Coast scarcity so far has not become alarming are the latest trends in stocks of the principal products and in water shipments to the district, as shown in accompanying charts.

A study of the charts on East Coast stocks reveals these situations, which on the whole are comforting:

1. *Crude stocks* of the district on September 22, 1941, were at almost the same level as a year previously and were over 2,000,000 barrels larger than two years earlier.

2. *Gasoline stocks* near the end of September, 1941, were more than 1,000,000 barrels smaller than those held a year previously, but the latter were so excessive as to depress prices close to all-time record low levels. As compared with two years ago, when there was likewise a surplus above operating requirements, present gasoline stocks show some increase.

3. *Light-fuel-oil stocks* in the East are practically the same now as a year ago, when the industry was congratulating itself on a comfortable surplus; and totaling around 18,000,000 barrels, they are 5,000,000 barrels or 40 percent greater than two years ago, when there lay ahead an exceptionally severe winter during which the industry nevertheless managed to avert an East Coast shortage of heating oil.

4. *Heavy-fuel-oil stocks* on the East Coast are about the same as two years ago but 2,500,000 barrels smaller than a year ago, indicating that some users may be obliged to substitute coal for fuel oil in coming months, a move that would not be greatly inconvenient or uneconomic in many instances.

5. *Kerosene stocks* in the East have been following about the same trends as in the past two years and never are of relatively great volume, August 1 inventories of nearly 2,000,000 barrels having compared with the high of less than 3,000,000 barrels as of November 1, 1940, and a high of about 2,250,000 barrels for October 1, 1939.

6. *Lubricants in storage* on the East Coast probably offer more cause for concern than do the stocks of some of the other products, being

15 percent less voluminous than a year ago and somewhat less than two years ago, whereas demand is relatively large because of defense requirements by industry. Ceilings on prices of Pennsylvania-grade crude and lubricants naturally appear of questionable advisability, in view of the Eastern stocks situation. And increased reclaiming of used lubricants by filtering or reprocessing, particularly by large consumers, is a development to be expected. However, as in the case of kerosene, East Coast stocks of lubricants are not of relatively great volume, having fluctuated during the past three years between 2,000,000 and 3,000,000 barrels; and serious difficulty in supplying all requirements of the district appears remote.

The accompanying charts on receipts of oils at East Coast ports, like those on stocks, are generally encouraging in nature, especially when it is considered that currently, the district is receiving substantial shipments of oils by pipe line and railway tank car, which are not shown on the charts, the data taking into account only shipments by water from the Gulf Coast, California, and foreign countries, which until recently accounted for the bulk of all receipts.

Examination of the charts shows the following facts:

1. *Eastern receipts of crude oil by tanker from the Gulf Coast* (none now comes from California) were approximately the same in August, 1941, latest month for which figures are available, as receipts from the Gulf and California in August of the past two years; and unless shipments are materially curtailed, they will be fairly close to the trends of one and two years ago.

2. *Eastern receipts of crude from foreign fields* have been running much higher this year than in the past, those for July, latest data, having totaled 5,000,000 barrels, against 3,000,000 in July, 1940, and 2,500,000 in July, 1939. This situation is especially desirable from the standpoint of alleviating the scarcity of fuel oils on the East Coast, as the oils imported are principally heavy crudes that are used for making heavy fuel oils and to some extent light fuel oils. The increased shipments from Venezuela, Mexico, and other countries to the south help to compensate for any lagging of receipts from the Gulf Coast, in so far as supplying the East Coast is concerned.

3. *Receipts of gasoline at East Coast ports* from the Gulf Coast in August, 1941, latest data, were slightly larger than receipts from the Gulf and California in August of either 1940 or 1939, after having run higher, similarly, throughout the earlier part of the year. (Shipments from California have been replaced by shipments from the Gulf Coast, in order to make the most efficient possible use of tanker tonnage.)

4. *Eastern receipts of domestic light fuel oils* in August were a million barrels larger than in August of last year and similarly greater than in August, 1939; and although statistics are not available for September, a sharp stepping up of deliveries is indicated by the fact that East Coast inventories have been climbing precipitously, as previously pointed out.

5. *Eastern receipts of heavy fuel oils* were greater in August, 1941, than in August of 1939 or 1940, after having run similarly higher in nearly every other month earlier this year; although it is doubtful if shipments will be maintained henceforth at the 1940 rate.

6. *Receipts of kerosene on the East Coast* have been about the same as in 1940 and 1939, and no great difficulty should be encountered in continuing a similar trend.

7. *East Coast stocks of lubricants* are being heavily drawn upon, but the drafts reflect the abnormally large demand rather than any failure to maintain shipments into the area, as receipts from the Gulf Coast have been much greater this year than heretofore, those in August having been nearly twice as large as the receipts in August of 1939 or 1940.

Although deliveries of gasoline to East Coast service stations are being restricted 10 percent, while some users of heavy fuel oil are being obliged to substitute coal, special efforts are being made by the industry and the government to avert the necessity of curtailing Eastern deliveries of heating oil; and heavy shipments of that product to the district are promoting relatively favorable inventory situation. Shown here is the bunkering of a large apartment house in Brooklyn with oil. —Photo by Ewing Galloway, New York.

Spindletop

Discovery Marked Birth of Modern Oil Industry

By GORDON B. NICHOLSON, Staff Writer

WHEN the Lucas Gusher roared its announcement to the world on January 10, 1901, that a great new oil field had been discovered near Beaumont, Texas, it started revolutionary worldwide developments that eclipsed previous attainments and boosted petroleum exploitation to its deserved place in the sun.

From the economical viewpoint, Spindletop's contribution to the Gulf Coast, to the United States, is immeasurable; but its profound effect on skill and technology in drilling oil wells is even greater, with new, heavy-type equipment developed that led to widespread use of rotary methods which had previously been unsatisfactory, including introduction of drilling muds to increase returns and relieve formational difficulties. The story behind the Spindletop discovery is one of hardship and perseverance, and the rugged determination which is so characteristic of the vital industry which it helped develop.

In honoring Captain Anthony F. Lucas by commemorating the epochal discovery, oil men the world over are cognizant of the fact that, while due homage is being given to him as an individual, erection of the monument to his honor also represents a symbol upon which the very foundation of the oil industry of today is based. Truly ponderous in its effect on Beaumont alone, discovery of the prolific field despite obstacles furnished the spark which the then haphazard oil business needed, and marks the birth of development of the Gulf Coast and all Texas as one of the greatest single oil reserves in the world.

That some inkling of the magnitude of the discovery at Spindletop was recognized at the time is evident by the excitement created throughout the world, and by statements made by outstanding oil men of the day. Typical of remarks is credited to ex-Mayor Samuel M. Jones of Toledo who observed the well during the time it blew wild and said:

"It is the greatest oil well ever discovered in the United States. Its advent means that liquid fuel is to be the fuel of the Twentieth Century. Smoke, cinders, ashes, and soot will disappear along with war and other evidences of barbarism. During the next few years you will see locomotives passing through Corsicana using oil for fuel, and ocean steamers will be using it too."[1]

Until discovery of the vast field, big names in the industry were scarce. Yet this huge field marked the beginning of such companies as The Texas Company and Gulf Oil Corporation, and furnished the nucleus for Magnolia Petroleum Company. Countless operators got their start at Spindletop, and a look at the roster of names active in the field, many of whom were new to the business or else young men at the time, reads like a roll call of some of the most important men in the oil industry today. At the same time, many of the modern drilling and production practices were first tried in the big field. Geological knowledge heretofore unsuspected received impetus by information gleaned from completion of the Lucas Gusher, and the science of petroleum engineering assumed practical rather than theoretical importance.

Story of Spindletop marks the culmination of efforts of home-spun geologists who refused to accept recognized opinions on petroleum geology and who developed apparently radical reasoning to substantiate their belief that oil was present underneath the "big hill" near Beaumont. As is the case with

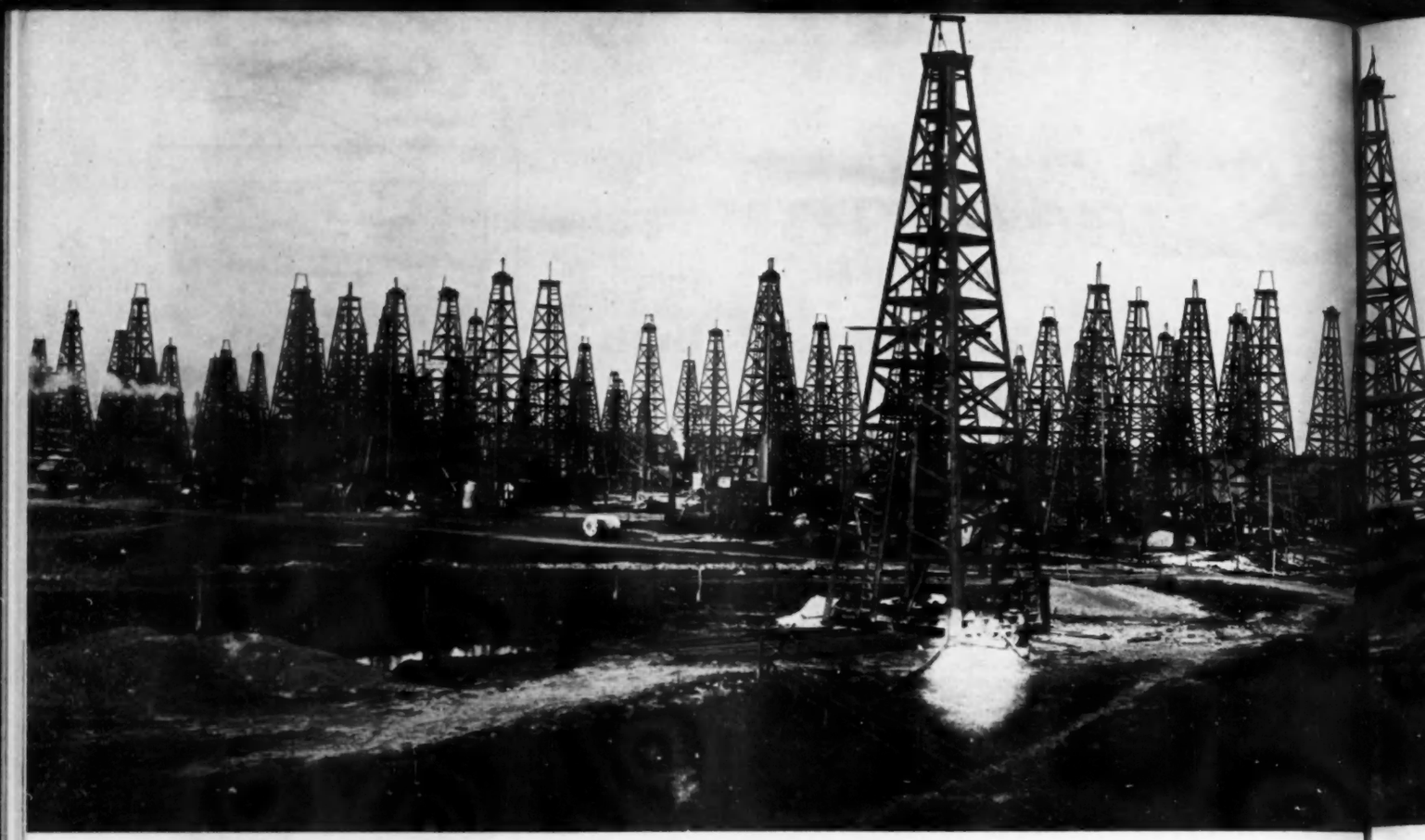
[1] Our Times, by Mark Sullivan, Vol. 1, page 556.

The Lucas Monument

On October 9, 1941, during the Convention of the Texas Mid-Continent Oil & Gas Association, a monument marking the site of the Lucas Gusher will be dedicated in honor of Captain Anthony F. Lucas, a man whose untiring efforts resulted in bringing in America's first large gusher, the discovery well of the Spindletop oil field.

Constructed of pink Texas granite set on a foundation made of a solid concrete mat, the obelisk rises 54 feet, 8 inches above the Spindletop soil, and is crowned by a four-faced star 3½ feet tall. The base is 5½ feet square, and on the four sides are engraved inscriptions depicting the artist's conception of Exploration, Drilling, Discovery, and Production. Above each inscription is a sculptured panel symbolizing a phase of the oil industry, and at the tops of the panels appear the words, "The Lucas Gusher."

Intaglios and inscriptions were designed by Pierre Bourdelle, New York sculptor, while design of the monument was evolved by Stone & Pitts, Beaumont architects, and Premier Granite Quarries, Inc., Llano, Texas.

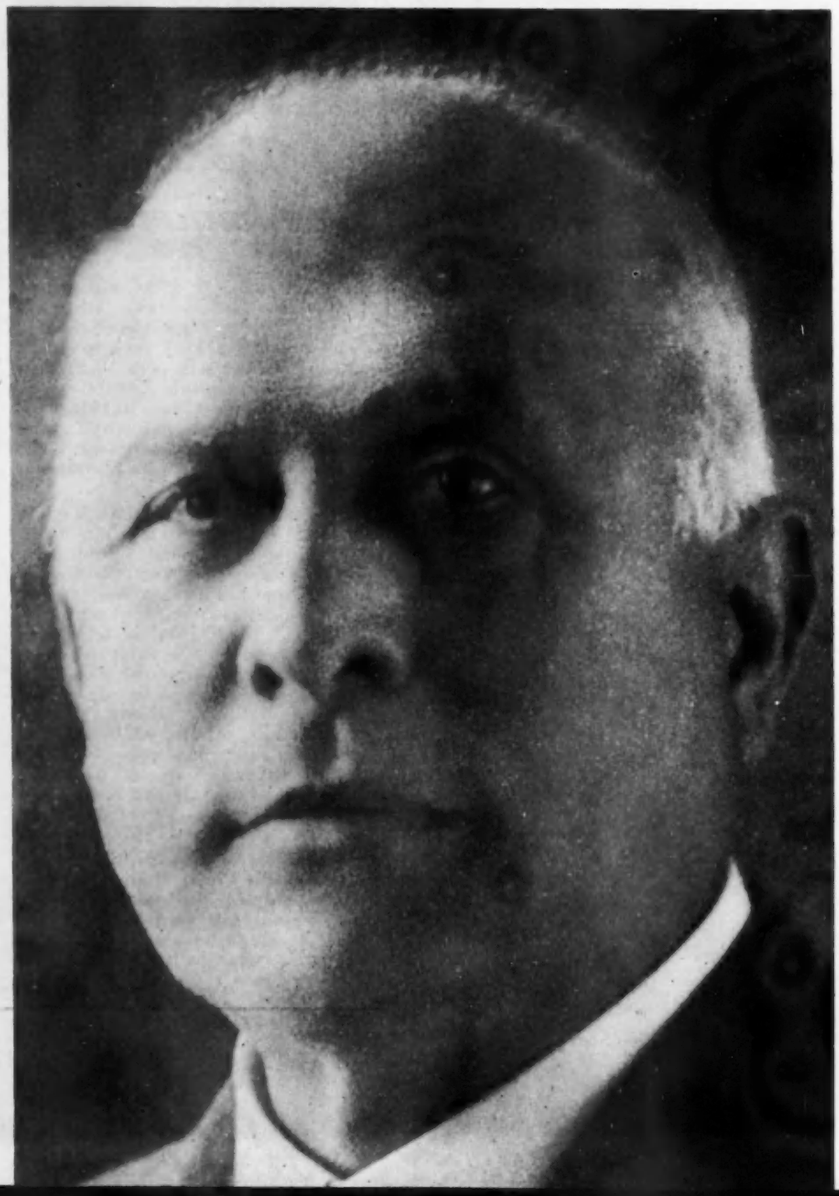


Spindletop at

The early boom brought much excitement and many rigs to Spindletop. Rush of drilling was second only to lease and stock transactions among speculators.

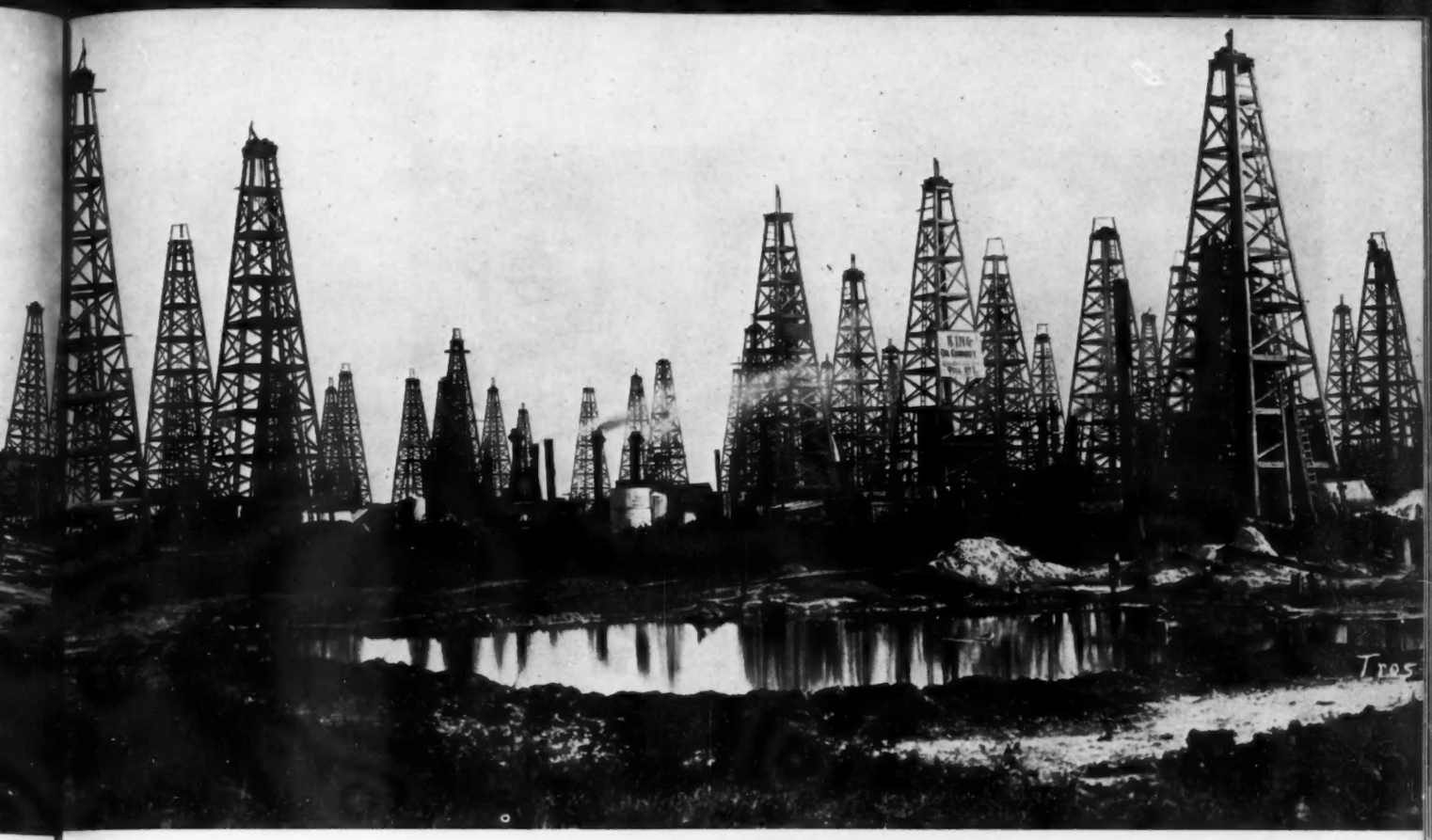
all other discoveries which have had historical weight, however, evidence was presented to show that oil had been detected long before it was exploited. There was no dearth of people who "knew it was there all the time." In the case of the Spindletop field, an itinerant doodlebugger by the name of B. T. Kavanaugh chronicles: "In August, 1866, I reached Beaumont on my line Southeast. Here I found some fine veins, one passing under the sour wells some mile or two southwest of Beaumont."

Whether there was any oil evident on the surface of the "big hill" prior to discovery of the Jefferson County field is a debatable question. Certain early geological bulletins mention oil seepages at Spindletop, although other publications state positively that there were none. Surface elevation, gas seeps, mineral waters and sulphur encrustations in the soil influ-



Captain Lucas

Captain Anthony F. Lucas, a native of Austria but naturalized an American, brought in the discovery well after months of hardships and disappointment. His tenacity in uncovering the Spindletop field revolutionized the technique of drilling for petroleum.



Height of Boom

The limited area was divided into such small tracts that machinery had to be located on borrowed ground, the "lease" being only big enough for the derrick.

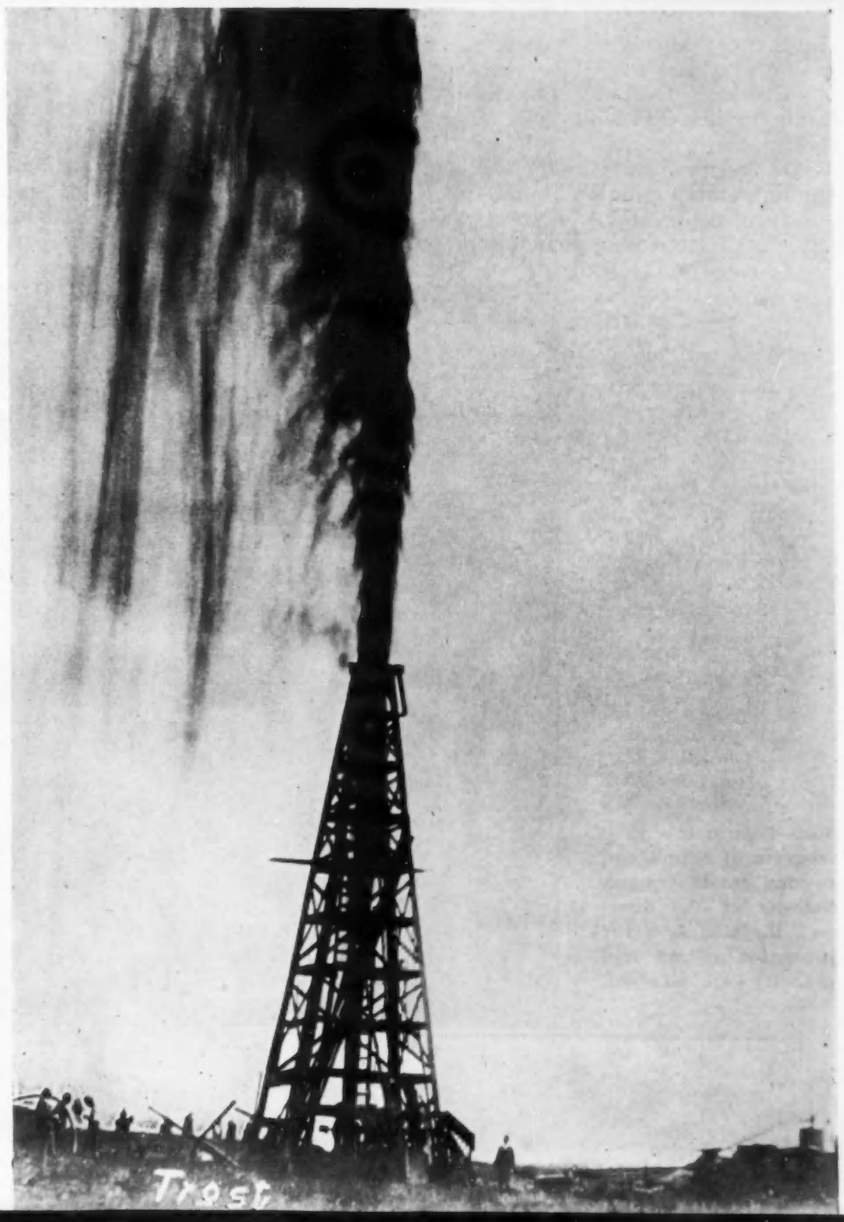
enced selection of sites for the first wells.

Instigator of the efforts which led to discovery was Patillo Higgins, a tireless, self-taught geologist of recognized ability and powerful convictions, who disregarded the opinions of experts in the comparatively young industry and others who stated that Texas is a state in which no great commercial production would ever be secured. George W. Carroll, a Beaumont lumberman, was influenced by Higgins and borrowed $1000 to make down payment on 1077 acres of land in the John A. Veatch League. Shortly afterwards, on August 24, 1892, Gladys City Oil, Gas, and Manufacturing Company was chartered with Carroll as president, and capital stock was issued against assets of 2700 acres in the Veatch League.

The company drilled several tests, and gas at 60 feet, with other

and His Gusher

On January 10, 1901, the fabulous Lucas Gusher startled the world with a roar that revealed a big oil field had been discovered near Beaumont, Texas. Flowing from only 1020 feet, oil spouted high into the air, estimates rating it nearly 100,000 barrels daily.

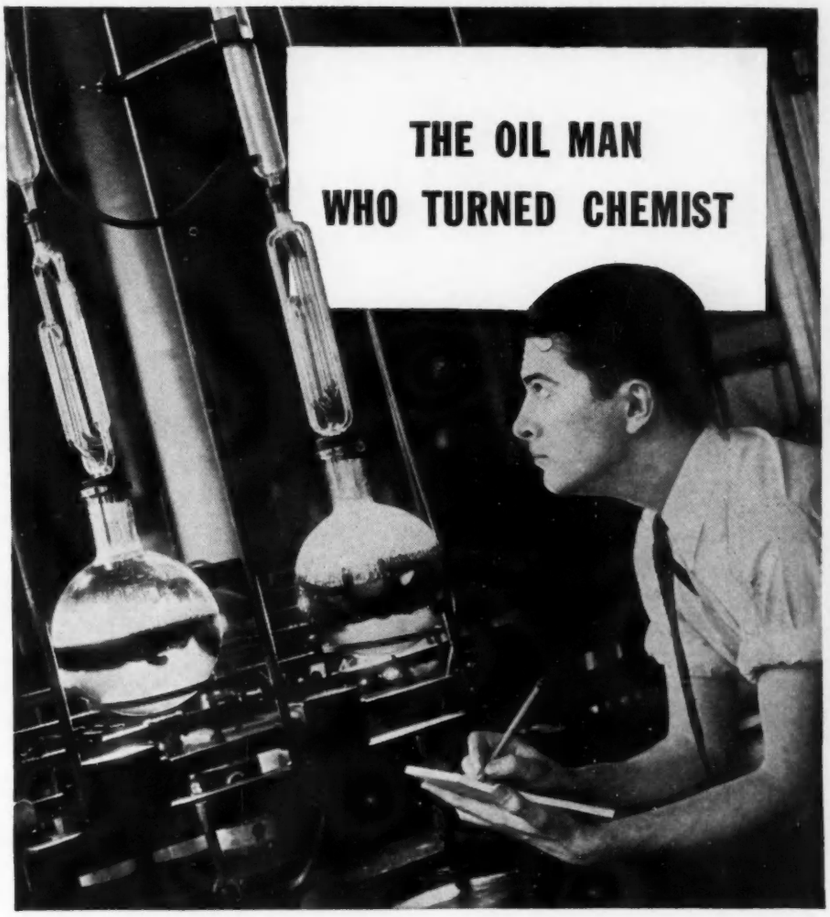


A typical 1901 gusher, many of which were opened frequently for amusement or to promote stock transactions.

slight encouragements, were found in one well, but to a lesser degree in the others. Difficulty of drilling through quicksand with crude cable tool methods forced abandonment at 418 feet or less. After these disappointments, Higgins found difficulty in continuing operations as citizens of Beaumont lost faith in his project, and soon he virtually withdrew from the company and acquired adjoining acreage independently.

In a trade journal, Higgins placed an advertisement which came to the attention of Captain Anthony F. Lucas, nee Luchich, native of Austria, graduate of Gratz Polytechnic School, and formerly an Austrian naval officer. In the United States, his adopted country, Lucas had become a mining engineer, and obtained experience in oil in his work on salt domes along the Louisiana Coast. After an exchange of correspondence with Higgins, Lucas left his

Such fires as this were frequent at Spindletop, causing untold damage. Because of the disasters, the first laws for protection of oil and property were enforced.



Back in the days of the first World War, oil from wells went into stills, came out as gasoline, kerosene, fuel oil. Then the oil man got busy with chemicals. Today, Petroleum Technicians turn crude into some 300 essential commodities.

But that isn't all. Improved techniques for locating, drilling, pumping, refining now enable us to produce *four times* the crude we did in 1917. From each barrel we get *twice* as much gasoline, with *twice* as much power to the gallon. Aviation fuel that cost $30 a gallon to *make* in 1934, now *retails* for 20 cents, could be produced in sufficient volume for an air force of 50,000 planes.

Our Petroleum Industry can turn out in two weeks enough gasoline to supply 250,000 Army motor vehicles for a whole year. And though our consumption of petroleum products is double that of rest of world, so, too, are our proved reserves... *and we are finding new oil at twice the rate we are using it.*

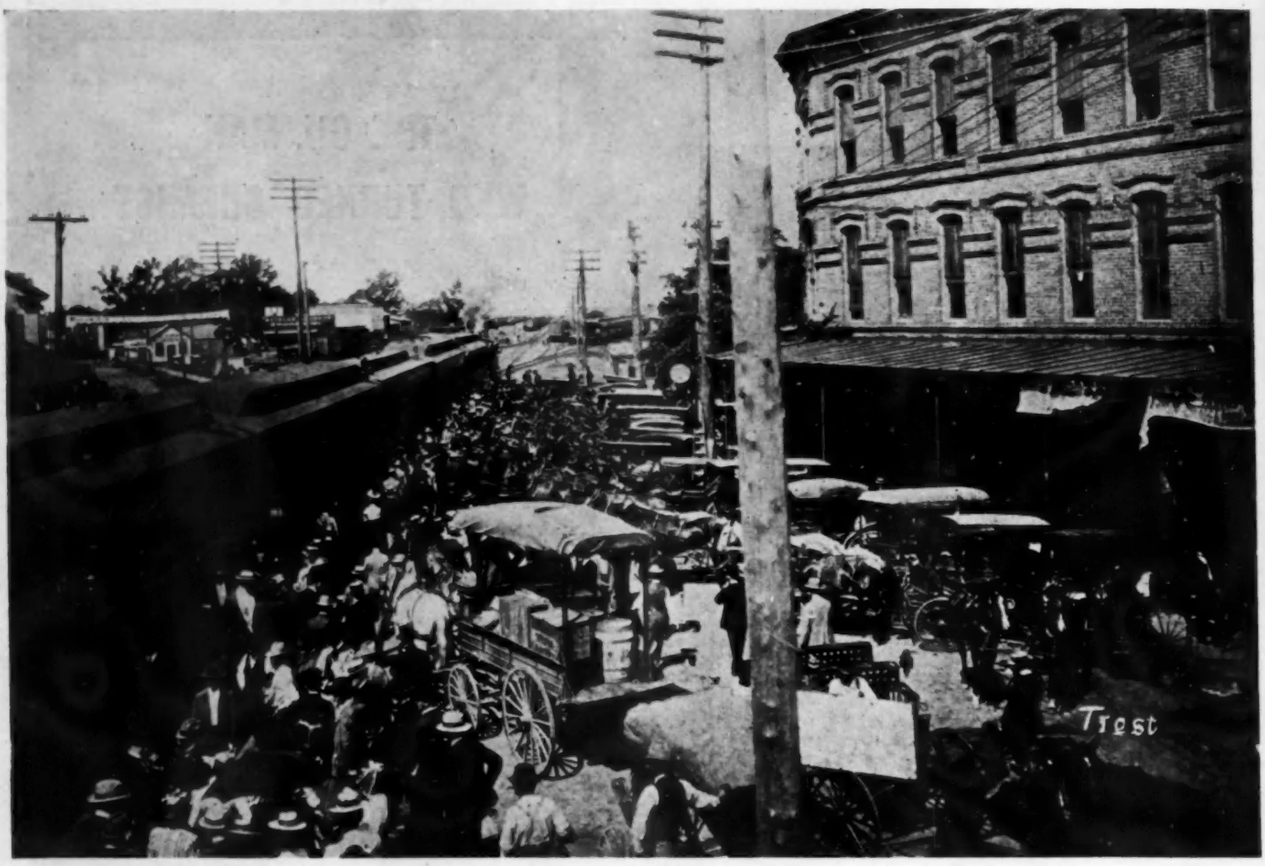
Hand in hand with this Progress of Petroleum has gone development of *Inco Nickel Alloys.* Increased pressures, temperatures, corrosion, stress and wear are matched by the increased hardness, toughness, and corrosion resistance of Monel, "K" Monel, Inconel and other Inco metals. Thus *Inco Nickel Alloys* in the Petroleum Industry as in scores of others are contributing to the Defense effort.

In modern refineries as well as oil wells, Monel, "K" Monel and other Inco Nickel Alloys are widely used for equipment.

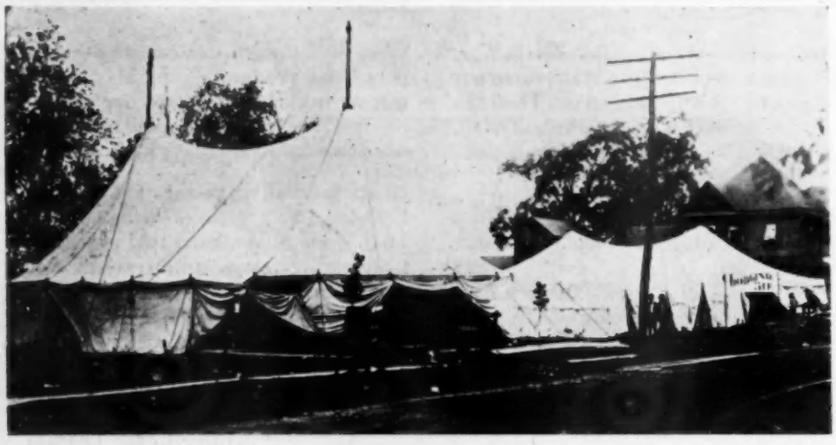
THE INTERNATIONAL NICKEL COMPANY, INC., 67 Wall Street, New York, N. Y.

MONEL "K" MONEL "S" MONEL "R" MONEL NICKEL "Z" NICKEL INCONEL

This advertisement featuring the progress of the Petroleum Industry appeared in the September 15th issue of "Time" and the September 6th issue of "Business Week"



Typical scene in the days of Spindletop showing general confusion and congregation of lease brokers, speculators, etc., gathered in front of the old Crosby House.

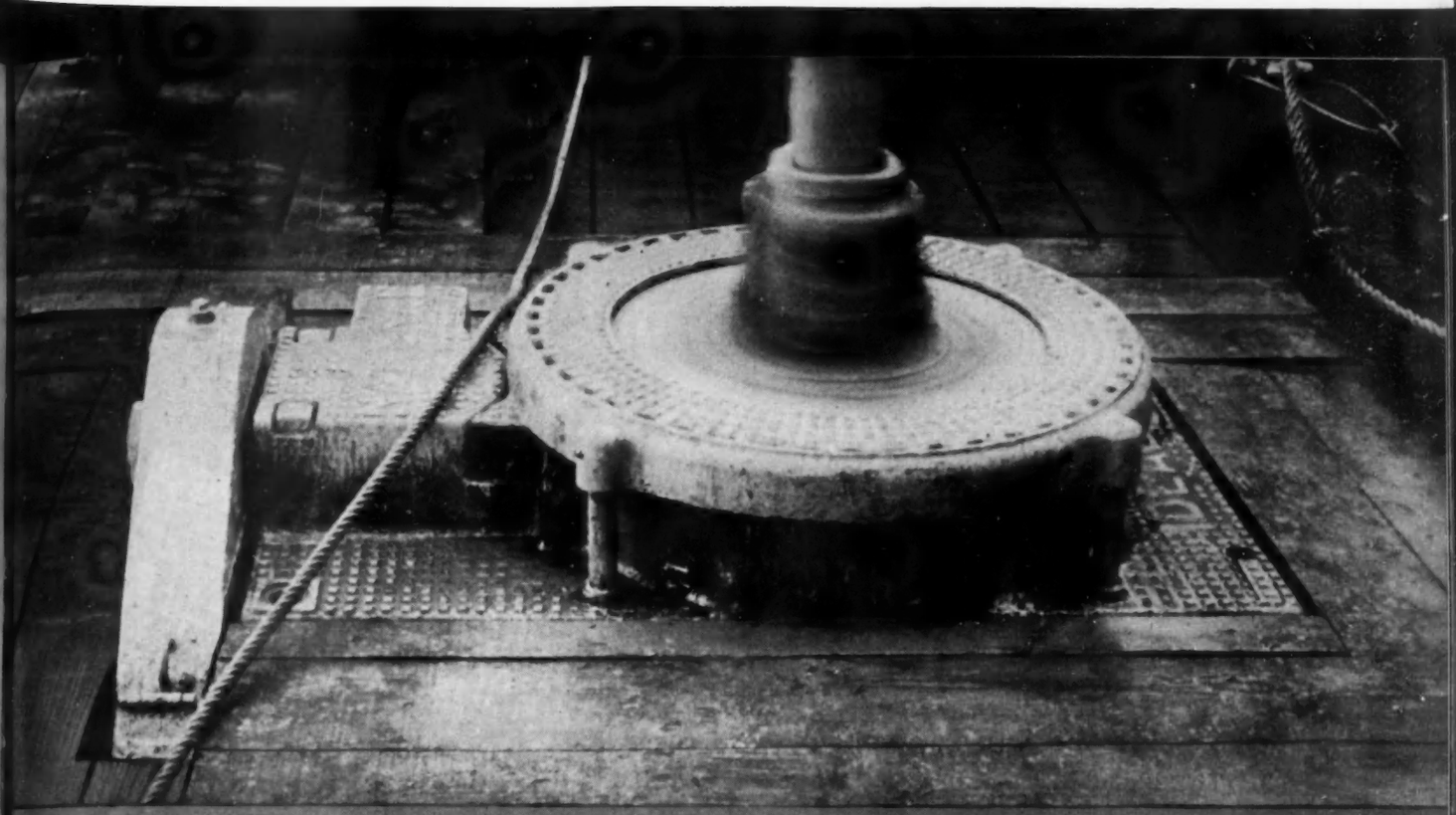


Lodging houses in Beaumont in 1902 furnished little comfort, but nevertheless were sought by oil-minded visitors.

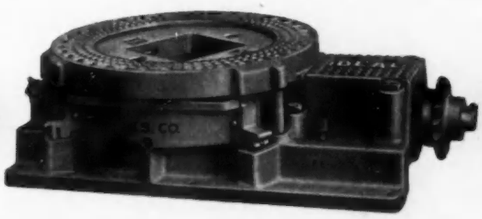
headquarters in Washington, D. C., and came to Beaumont, where he leased the Gladys City land for $33,150, conveying a one-tenth interest to Higgins.

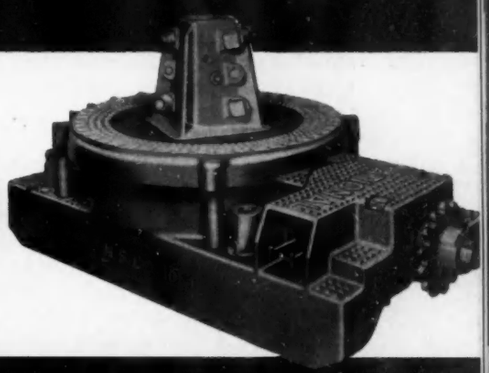
Lucas drilled a well 930 feet northwest of the site of the gusher-to-be, encountering strong showings of gas and obtaining a small amount of oil that tested 17 degrees Beaumé. Quicksand and difficulties with the inadequate drilling apparatus forced abandonment at 575 feet, but only after expenditure of considerable money and suffering of untold discouragement. These operations placed Lucas in severe financial difficulties, and by this time, no more help was forthcoming from business men in the Beaumont area. It was suggested that he contact the firm of Guffey and Galey, of Pittsburgh, favorably known in Texas by its success in opening commercial production at Corsicana four years previously, and recognized as famously lucky "wildcatters" who were willing to sink a well anywhere. Lucas went to Pittsburgh and persuaded Galey to visit Beaumont. As a result, the firm assumed financial burden of all further exploration, and accepted from Lucas all but a small interest in his leases.

In August, 1900, the firm of Hamill Brothers, composed of J. G. and A. W. Hamill, oil-well contractors of Corsicana, received a letter from John H. Galey stating that Captain Lucas would call on them shortly for the purpose of getting a contract price upon a wildcat well to be drilled by rotary rig in the vicinity of Beaumont, and that any agreement made by Captain Lucas would be backed by Guffey & Galey. J. G. Hamill went



. . . . The world's record for drilling depth and many records for drilling speed are held by Ideal Rotary Machines. We believe they have made more records... both for depth and speed... than any other make. These remarkable performance records are largely responsible for the wide acceptance of Ideal Rotaries in every oil field.





IDEAL MS-27½ Rotary Machine

This is National's machine with the largest size opening to meet field requirements for setting large surface strings through the table. Supplanting the well-known Type FE-27½-B, which has given so many years of excellent service, this rotary is for speeds up to 350 r.p.m. at any known depth.

IDEAL FE-12½ Rotary Machine

This machine has been designed to meet the need for a sturdy, short-coupled unit for portable work. Because of the short centerline distances available—either 36" or 44" between center of table and sprocket—it is particularly adaptable to truck or trailer mounted "slim hole" drilling rigs. Many outstanding features of the larger types are incorporated in this machine, its drilling capacity permitting its use on many conventional rigs.

IDEAL SHS-20½ Rotary Machine

The Type SHS-20½ is an improvement over the HS-20½ Rotary, which has been so universally popular and has pioneered high speed drilling. With drilling speeds now exceeding 500 r.p.m., National is meeting the demand with this superspeed machine. It is designed to meet the need for the highest speeds required and at the same time to carry the longest drilling strings.

NATIONAL SUPPLY COMPANY

EXPORT

THE NATIONAL SUPPLY CORPORATION
30 ROCKEFELLER PLAZA
NEW YORK, N. Y., U. S. A.

•

RIVER PLATE HOUSE
11 LD. PLACE, LONDON, E. C. 2
LIMITED LIABILITY

•

PLOESTI, ROUMANIA

•

MARACAIBO, VENEZUELA

to Beaumont checked the proposed site, and submitted a price of $2 per foot for a 1200-foot test, with Guffey & Galey to furnish all pipe.

A. W. Hamill accompanied the equipment to Beaumont in October, 1900, and made arrangements for lumber, teaming, and fuel, being joined in a few days by the drilling crew. Drilling equipment consisted of a 25-horsepower boiler, two 8 x 10 x 5 circulating pumps, rotary and two-post drawworks, and an engine, with necessary chain tongs and hand tools, and work commenced on Lucas' Gladys 1.

Drilling on the well progressed nicely to 160 feet, where circulation was lost in quicksand. The decision was to wash in all the 8-inch pipe possible, rotating the 20 feet of 10-inch pipe already set, washing in with 4-inch pipe. A heavy block was fashioned to work around the 4-inch pipe, striking on a drivehead on the 8-inch pipe. The drive block was driven by hand from the cathead on the drawworks, a job later described by the driller as "man killing."

This process was successful to 445 feet, where the 8-inch casing was landed in gumbo. Next event of note was at 650 feet, where a gas pocket blew the well out, but was soon exhausted. Tour was established at this point, with one man always on duty to maintain steam and keep the pumps in motion and the drill pipe rotating slowly, with the thought that this would prevent blow-outs and stuck pipe.

At midnight, December 9, drilling again became easy, permitting the drilling out of a full joint in a few hours; then oil began showing on the slush pit. A member of the crew went for Captain Lucas, who lived a mile from the well. Lucas showed some excitement, and directed that drilling continue to measure the depth of the oil sand. After another 35 feet of soft sand, the going became hard. This was at about 880 feet. Captain Lucas directed that the 4-inch pipe be set as a test string, and wired Galey to hurry down from Pittsburgh.

On Galey's arrival bailing was started, rewarded by a small flow which soon ceased as result of soft sand that had heaved 300 feet up the pipe. The well was alternately bailed and washed with 2-inch pipe, with no definite success. Galey directed that the 4-inch pipe be pulled and 6-inch casing landed on the hard formation.

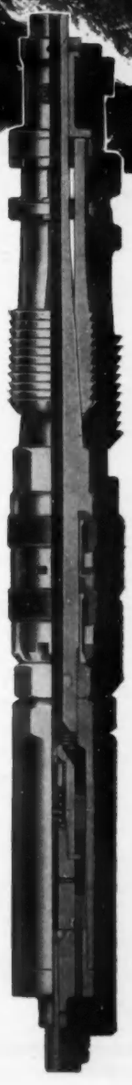
Work was resumed on January

HELL and HIGH WATER CAME!
HOUSTON OILMEN TRY TO ASCERTAIN LOSS IN HURRICANE
Hurricane Moves On Texas Coast
THE HOUSTON CHRONICLE
INTERSTATE EDITION Price 5 Cents
3 LIVES LOST AND MILLIONS OF DOLLARS IN DAMAGE DONE BY TROPICAL HURRICANE
Hurricane Races Furiously Spreading Destruction Across Southern Texas
Damage High As Hurricane Smashes Inland
Two Are Dead; Winds Up to 100-M.
FLOODED RIVERS IN NEW MEXICO DROP; RAIN SEEN
Wind, Rain and Hail Strike
Lightning, Wind Strike This Area
Damage Mounts Into Millions as Late Crops Are Blown Down and Buildings Unroofed; Battered Coast Cities Dig Out
Storm Lessens Inland After Severe Damage
Houston, Sept. 24. (UP)—The howling hurricane that cut a destructive swath through Houston and the gulf coast and took six lives was petering
Wind Hits Coast Towns At 90 M.P.H.
Storm Front Extends From Freeport to Matagorda, Curves Toward Northeast
New Mexico Cities Keep Watch on Rising Floods
Crest Moves Toward Roswell
HURRICANE CAUSES THREE FATALITIES
At Least Two Are Dead
Losses To Reach Millions
Isle Seawall Braves 'One of Roughest Seas In 10 Years'
77-M.P.H. Winds Hit City
New Storm Moves West and North From West Indies
Disturbance of Slight Intensity
STORM POLICY HOLDERS RUSH LOCAL AGENTS
HIGH WINDS AND TIDES HIT COAST
Tropical Hurricane Is Expected to Pass Inland in Vicinity of Matagorda Bay; Considerable Damage at Port O'Connor
Storm Refugees Go Home, Find Loss in Millions
DID YOU HAVE Sub Surface CONTROL?

MARACAIBO, VENEZUELA

"COME HELL OR HIGH WATER"

OTIS TUBING SAFETY VALVE GIVES *Sub-Surface* CONTROL



Regardless of what destructive force may damage the Surface Controls of your well, there is no need for worry about the well or surrounding property with an OTIS Tubing Safety Valve in the hole.

Sudden release of pressure resulting from damage to surface connections is instantly controlled at sub-surface levels. The Tubing Safety Valve permits flow at a predetermined rate, but should this rate increase from any cause, it will automatically plug the tubing. A velocity valve makes this possible—its weight holds it in open position until the flow becomes great enough to lift valve to closed position and shut off tubing. After surface repairs have been made, the valve can be opened by equalizing pressures across it.

The Otis Tubing Safety Valve may be run or pulled under pressure with an ordinary steel measuring line. It may be set at any depth without disturbing well pressure.

Write or call your nearest OTIS representative for complete information.

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1, 1901, after a Christmas shutdown. In the next 7 days 140 feet of hole was made, making a total of 1020 feet. At this point an apparent crevice made drilling hard and uncertain, and resulted in several breaks in the rotary chain. Drill pipe was pulled to substitute a fishtail bit. With 700 feet of pipe back in the hole, rotary mud began flowing through the table, coming fast and with such force that Curt Hamill, Al's brother, on the double board, was drenched.

Soon the drill pipe began coming out of the hole, knocking off the crown block and breaking off in lengths of several joints as it hurtled skyward. After mud, water and pipe were blown out, a short gas flow ensued; then, when the well was quiet, the crew ventured back, and in some disgust began to shovel mud off the floor and equipment. Suddenly a slug of mud shot out of the well with a cannon-like report, followed by gas, then heavy heads of oil.

Within a few minutes, Gladys 1, was holding a steady flow at twice the height of the derrick. Byrd started on the run to notify Captain Lucas, who was located at a store in Beaumont. The Captain appeared over the hill with his horse on a dead run, rolled from his buggy, and embraced A. W. Hamill, the driller. This was at 10:30 on the morning of January 10, 1901.

The Lucas gusher was in with a force and volume far in excess of anything previously witnessed in the United States. As hours passed the flow increased. Captain Lucas, in a wire to John Galey, estimated the flow at 35,000 barrels daily. Estimates made by other oil men varied from 70,000 to 100,000 barrels daily, and most were agreed that during the 9 days which the well went uncontrolled, almost 1,000,000 barrels was spread over the prairie. As a 4000-barrel well in Pennsylvania had previously been a matter of national comment, it was not surprising that the gusher was a sensational spectacle.

"By nightfall, news of the discovery had traveled far. Word had gone across the Atlantic that a gusher flowing at the rate of from 75,000 to 100,000 barrels daily had been found in a town near tidewater—important news to countries using dwindling supplies of coal for fuel. In the financial capitals of the United States the stock markets reflected the news, and predictions were made that unless the well proved to be a freak or a crevice well, the day of universal fuel oil consumption had arrived. A spokesman of the industry said, 'Once a sufficient supply of oil is assured, there will be a demand that is not appreciated now.' Beaumont's nearness to the Gulf was not overlooked; the Russian gushers had not been a great factor in the fuel market; they were 620 miles from a shipping point. Transportation costs made the price of their oil excessive. Spindletop seemed to promise what all the world needed, cheap oil."[2]

Captain Lucas, realizing the hazard of the wild well, exclaimed, "Now that we have her, boys, how are we going to close her up?" Rapid action was imperative. Guards were recruited from the mass of sightseers to hold back the crowd and prevent fires and were posted 50 by day and 40 by night. Forty 4-horse teams were taken from the McFadden, Wiess & Kyle rice farms to plow up the oil soaked grass and build levees to retain the oil. The original hastily constructed levees were soon over-

[2] Beaumont (American Guide Series)

"GROWING UP" WITH THE INDUSTRY!

Since Lucas Gusher days, Luke Pivoto, founder of Texas and Louisiana Tool Company, has been identified with the oil industry . . . both as a producer and as a designer-manufacturer of oil tools. This rich background of practical experience, gained over a period of forty years, is reflected in today's oil tools which bear the "Tex-La" trademark.

Tex-La Oil Field Specialties and field services are helping numerous operators drill low-cost footage. They are illustrated and described in your Composite Catalog.

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Salute to a PIONEER

LUCAS GUSHER MEMORIAL
Stone and Pitts, Architects.
Pierre Bourdelle, Sculptor.
Premier Granite Quaries, Inc., Contractors.

The Lucas Gusher, brought in by Captain Anthony Lucas on January 10, 1901, is universally recognized as one of the important "firsts" of petroleum history. It marked the beginning of the great Spindletop field, the most prolific oil field yet opened; the first oil field on the Gulf Coast; and led to the discovery of the first Louisiana field at Jennings.

It was the first important well drilled with rotary tools; it proved salt dome drilling; marked the Gulf Coast as a major production area; started the State of Texas on a long and productive career in petroleum; and in various ways marked the beginning of a new era in oil. Oil is still produced on the original lease, which has been operated by the Unity Oil Company for thirty-five years.

This grand old veteran will be signally honored at Beaumont, Texas this month. A 54-ft. monument built of Texas Granite over the site of the Lucas Gusher by contributions from various members of the petroleum industry, will be unveiled during the convention of the Mid-Continent Oil & Gas Association. The proposed memorial is illustrated above.

Tretolite is honored to join with others throughout the world in paying homage to this conspicuous leader and worthy veteran of the oil industry.

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flowing and it was necessary to throw up others farther from the well.

Frantic efforts to close Gladys 1 were hampered by inadequate equipment, but finally the gusher was completely shut in on January 19. A large iron cylinder was erected around the well and filled with sand. This action paid its dividend on March 3, when a prairie fire burned to the lake which became shrouded in 100 foot flames and dense black smoke. The fire resulted in loss of the oil and equipment, but left the well undamaged and removed the fire hazard of the lake.

Beaumont Becomes Boom Town

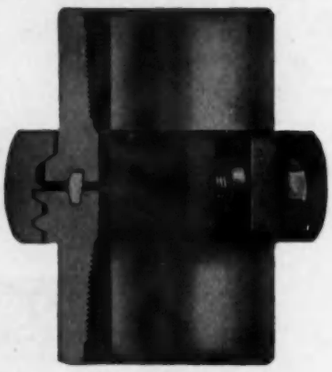
Oil experts, investors, executives, and stock-promoters rushed to Beaumont. Special trains daily bore coachloads of passengers imbued with the spirit of easy wealth, some of them wearing badges inscribed "All is WELL at Beaumont". The population leaped. Hurrying hundreds filled the streets, all animated with the hope of quick riches from oil. Gushers were opened wide for the edification of the uninitiate, many of whom were fleeced in blue-sky stock speculation. The appellation of "Swindletop" was not entirely undeserved. Transactions were carried on at all hours of the night. A. D. Childress, secretary of the Beaumont Oil Exchange, said "I saw men start out to the oil field at half-past one in the morning to look for gas bumps and oil land by moonlight". The Klondike, the Rand, and Cripple Creek were no more swept away than was Beaumont in 1901.

Land prices jumped from $10 per acre to many thousands. Tracts 20 feet square in the producing area sold for $75,000. Lands and leases were available at any hour of the night from hawkers in front of the Crosby House. Royalty was not sold. There was no time to calculate the value of 1/64 of 1/8 of 1/16. The world's smallest leases were sold. Tracts 2 x 3 feet were snatched up, and drilled if the purchaser could borrow enough adjacent land to support a derrick. Time was the essence, with every train from Houston and the East bringing more spectators and laborers. Billiard tables were choice beds.

Although the district gained a reputation for violence and lawlessness in the East, all credible accounts state that, considering the circumstances, the fortune seekers were orderly, with little thieving, only two homicides in three months, and respect accorded to ladies in the roughest of crowds. Thirteen saloons remained open day and night seven days a week.

Foundation for Fortune

A factor that has done much to extend the influence of Spindletop for 40 years is the number of young men who used the experience or financial gain made there as foundation for later prominence in the industry. Many men now or lately prominent received training in America's first gusher field. Hundreds of companies were organized and intensive drilling was commenced by many. By July 1, 1901, there were 14 producers, 3 abandoned wells, 15 tests drilling, and 18 rigging up — all on an 80 acre tract. It was established that capital invested in oil in the Beaumont area at the end of 1901 was $3,951,000, and that 5,185,000 barrels of oil had been produced and saved, of which 1,592,000 barrels was held in stock, the balance having been sold for $630,000. Over 400 companies with a total capitali-



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During the seven years that the RED-REX "Quick Joint" Pipe Union has been making life easier for oil men, numerous other unions have come on the market, flashed momentarily, and then disappeared. Today, RED-REX Unions installed seven years ago are still giving trouble-free performance. When you use RED-REX you're sure to get:

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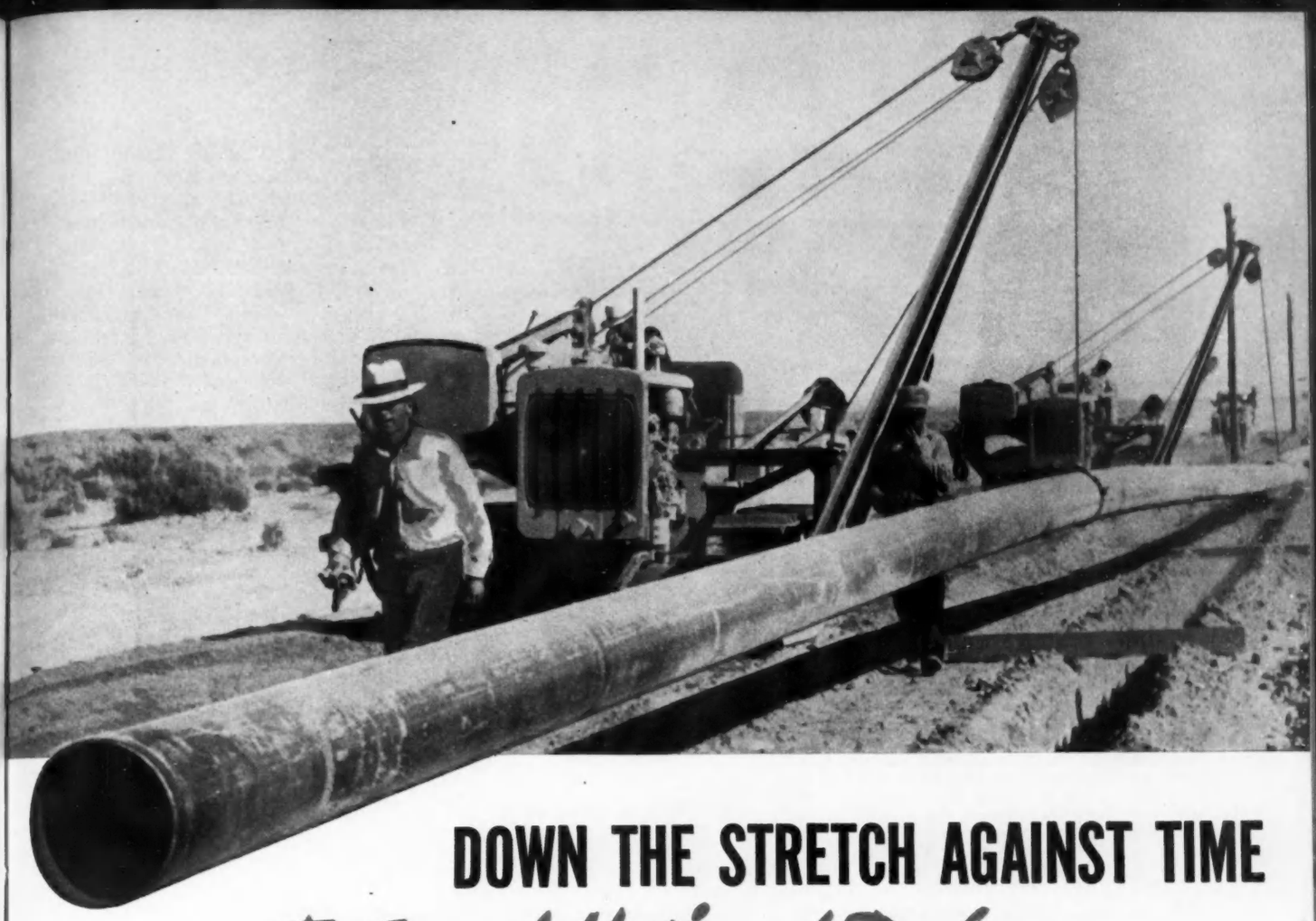

DOWN THE STRETCH AGAINST TIME

To Speed National Defense

Thousands of miles of pipe lines form a vast network of steel across America. Millions of gallons of oil and gasoline—millions of cubic feet of gas—are transported from well to plant, from plant to plant and from both well and plant to point of use.

But that's not enough. To make our National Defense strong—to provide more fuel for power and heat where the need is vital, we need more pipe lines. And we'll build them — quickly — and in time.

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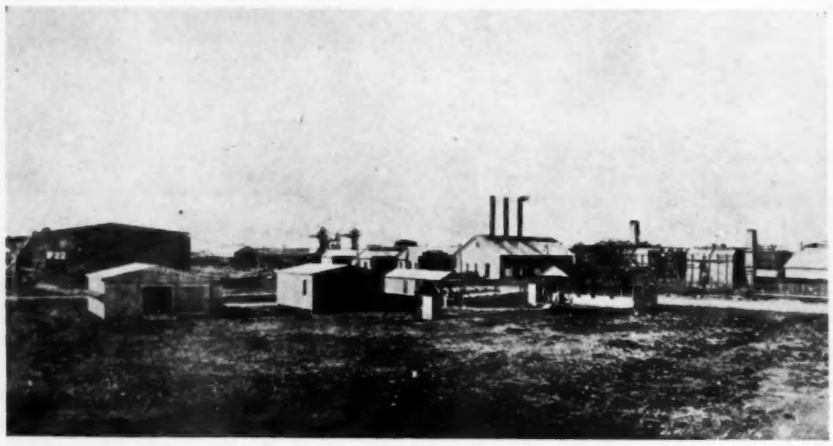
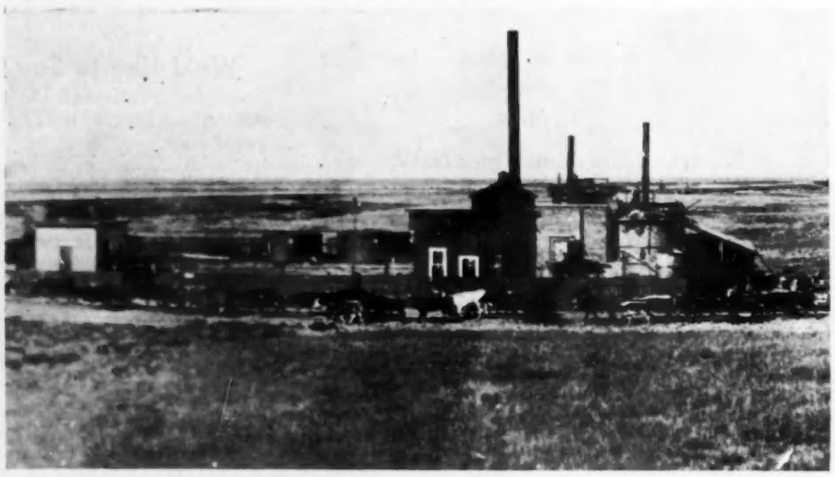
LINE PIPE . . . NORMALIZED CASING AND TUBING

The primitive plant at top was the first refinery of The Texas Company, erected on a small tract of land near Port Arthur. The plant is now among the largest refineries in the world.



The first refinery in Beaumont (right) was built by Burt, et al, and was the nucleus of the present Magnolia Petroleum Company refinery. This is not the original Magnolia refinery, the first having been built previously at Corsicana.



This cow-pasture scene is really the first refinery of Gulf Oil Corporation, built near Port Arthur by Guffey & Galey.

zation of $20,000,000 were organized within the first year. Among these companies were the Higgins Oil & Fuel Company, and The J. M. Guffey Petroleum Company (now Gulf Oil Corporation). Other companies organized immediately thereafter include Texas Fuel Company (now The Texas Company), which was organized by J. S. Cullinan and associates.

Two weeks after the Lucas gusher came in 6-inch pipe was being installed for a line to Elvista. This line was finished February 14; two days later Guffey Petroleum Company contracted to sell and deliver oil to Gulf Company, which was a corporation doing business in and about Morgan City, Louisiana. The price quoted was 25 cents per barrel of 42 gallons. During the summer work was commenced on the first refinery in the Beaumont-Port Arthur area, that of Guffey Oil Company. The Burt Refinery, first in Beaumont, was acquired successively by several operators, and finally by Magnolia Petroleum Company. On November 22, 1902, the directors of The Texas Company voted money for the first units of a refinery at Port Arthur. Before the refineries were in operation crude oil distribution was handled by Guffey Oil Company, with storage at Lucas Station, Elvista and Port Arthur; National Oil & Pipe Line Company, with pumping stations and storage at Spindletop and Port Arthur; Higgins Oil & Fuel Company, with storage at Spindletop and Beaumont; Lone Star & Crescent Company, with storage at Spindletop and Sabine Pass, and Heywood Oil Company, with storage at Spindletop.

Beaumont was at the time beginning to develop as a port and railroad center. No more strategic location could be found for a refining center. Today the Beaumont-Port Arthur area processes one barrel of every eight run to stills in the United States and boasts a capacity of 490,000 barrels daily, largest of any concentrated refining section in the world. The original plants, expanded and remodeled many times, still constitutes the bulk of the district capacity, and have been augmented by the three plants of importance, including The Texas Company at Port Neches for asphalt, Magnolia Petroleum Company refinery at Port Neches, the Smith's Bluff refinery of The Pure Oil Company, and the Atlantic Refining Company at Port Arthur.

Investment in the plants totals approximately $70,000,000. Shipment of oil by water from Texas

began in March, 1902, when the tanker *Atlas* of the Standard Oil Company's fleet left Sabine Pass with a cargo of Spindletop crude.

Development

Problems at Spindletop were by no means few. Drilling equipment and tankage was difficult to secure. Scarcity of tank cars was an acute problem. James W. Swayne and James S. Hogg, former governor of Texas and sponsor of the railroad commission, took a leading part in the fight to secure more tank cars.

Two of the first 17 wells were wrecked by blowouts. Gushers, some of which exceeded the Lucas well, were coming in at the rate of one a week for the first six months, and their control and disposal of the oil was a persistent problem. The opening of wells to stimulate stock sales was a common practice, full of danger to life and property. On August 30, 1901, the first organized safety movement in the history of the oil industry was undertaken. Sixty-one individuals, representing themselves, 50 oil companies, and two supply companies, met and appointed a committee headed by Geo. A. Hill, Sr., to formulate rules for the prevention of fire and explosion.

The rules adopted were concise, applying mostly to the removal of fire hazards, but directing the filling in of slush ponds, casing or bricking of wells, and removal of saloons from the field. The committee continued their efforts against opposition, filing many complaints in the district court. The decisions of the committee constitute the first effort to prevent waste and to reduce hazards incidental to oil-field development. Such was the beginning of recognized conservation methods and uniform drilling and production technique prescribed by law, and, in fact, marks the inception of various state conservation departments. With deplorable conditions being recognized by the authorities, and the exact circumstances and their effects variously described, laws for mutual protection of the operators in the field and the inhabitants nearby were devised. The sole check on wasteful practices was previously provided in a bill passed by the house in 1899, which ordered casing off before drilling into oil, gas, or water sand, and prescribed the procedure for plugging upon abandonment, but this law was not generally observed.

Spindletop — Cradle of Development

Spindletop merits first rank as a proving ground for men, materials, and methods. Warner, in "Texas Oil and Gas Since 1543," credits Patillo Higgins with the first application of geologic principles to the location of oil. Higgins' conviction, expressed in 1892, that gas seeps, mineralized waters, and topographic elevation bore some relation to the occurrence of oil may therefore be regarded as one of the beginnings of petroleum geology.

Practical petroleum engineering began at Spindletop. It was the first time that the obstacles to be overcome were tougher than the equipment available for the job. The rotary rig, with improvements and new methods effected at Spindletop, bridged the gap. New equipment was pressed into service, and in drilling and producing wells at Spindletop, a foundation for subsequent mechanical development was laid. The resourcefulness of pioneer operators in this field

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was a base for the modern science of petroleum engineering.

Many fundamental field operations were first tried at Spindletop, while many other operations introduced elsewhere were perfected. No attempt is made to rank them in order of their importance, but some of the "firsts" accredited to the field may aptly be described.

Spindletop had a profound effect on drilling equipment, constituting a testing ground for new equipment and a proving ground for old. First in importance in equipment changes resulting from discovery of this field is technique and methods for drilling by rotary. The practicability of the rotary rig was demonstrated a few years before Spindletop by its use in the Corsicana oil field which was the first field of commercial importance in the state, although early rotary drilling was limited by inadequacy of the equipment. Drilling wells with rotary rig was a procedure entirely unknown in the Eastern fields. An earlier attempt to drill a wildcat in the Spindletop area by cable tool was unsuccessful due to a quicksand deposit found a few feet below the surface and which was unpenetrable by cable tool methods, and as a result, the finest rotary equipment then available was used to drill the Lucas test. Success in its operation proved its merit. In the Spindletop discovery well and in future developments in the field, where cable-tool methods had failed in the soft formations, efficiency of rotary drilling was proved. In years to follow, it was this type of drilling that was to revolutionize the oil and gas industry by the drilling and completion of wells in the so-called "soft rock country" of the Gulf Coast and by the more economical drilling of wells in many parts of the world.

"OIL IS WHERE YOU FIND IT" from a lithograph by E. M. Schiwetz

The rotary rig in its primitive form was not suitable for drilling in hard sandstone and limestone formations, and development after the rotary drilling period that followed Spindletop's discovery was retarded or restricted to the Gulf Coast until bits adapted for drilling hard structures were perfected. Fishtail bits used at Spindletop cut rock very slowly, and wore down rapidly, requiring frequent changing and sharpening, and the gauges diminished so fast that holes usually tapered abruptly and had to be reamed to obtain full diameter. Among the first methods to overcome such difficulties was development of the drag shoe and drag bit, by means of which chilled steel shot were dragged around on the rock. This bit was more efficient than the fishtail bits, but it was not until after invention of the rock bit in 1909 that rotary drilling was successfully used in hard formations.

The idea of using Portland cement for various purposes in oil wells was introduced into the district during the early days of Spindletop, and its first use was in shutting off water and filling cavities in drilling wells, its first trial being made by Joe A. Myers, later head of Unity Oil Company. Cement run inside bed ticking was placed in the hole, and bottom-hole water was shut off successfully by this method in a number of wells. Later practice led to forcing the cement behind the casing to shut off water.

Use of mud as a drilling fluid began with the Lucas gusher. It is stated that: "Deciding that a mud fluid would be more efficient in bringing the returns to the surface, Curt Hamill plowed up the bottom of the water pit, drove in some cows, and started milling them around to muddy the water pumped down the drill stem, after

OUR location in the oil capital of North America has given us an inside knowledge of the oil man's banking requirements, and a wide experience in meeting them. Corporations and individuals in every department of the oil industry have found First National service helpful; so will you! Discuss your banking needs with us.

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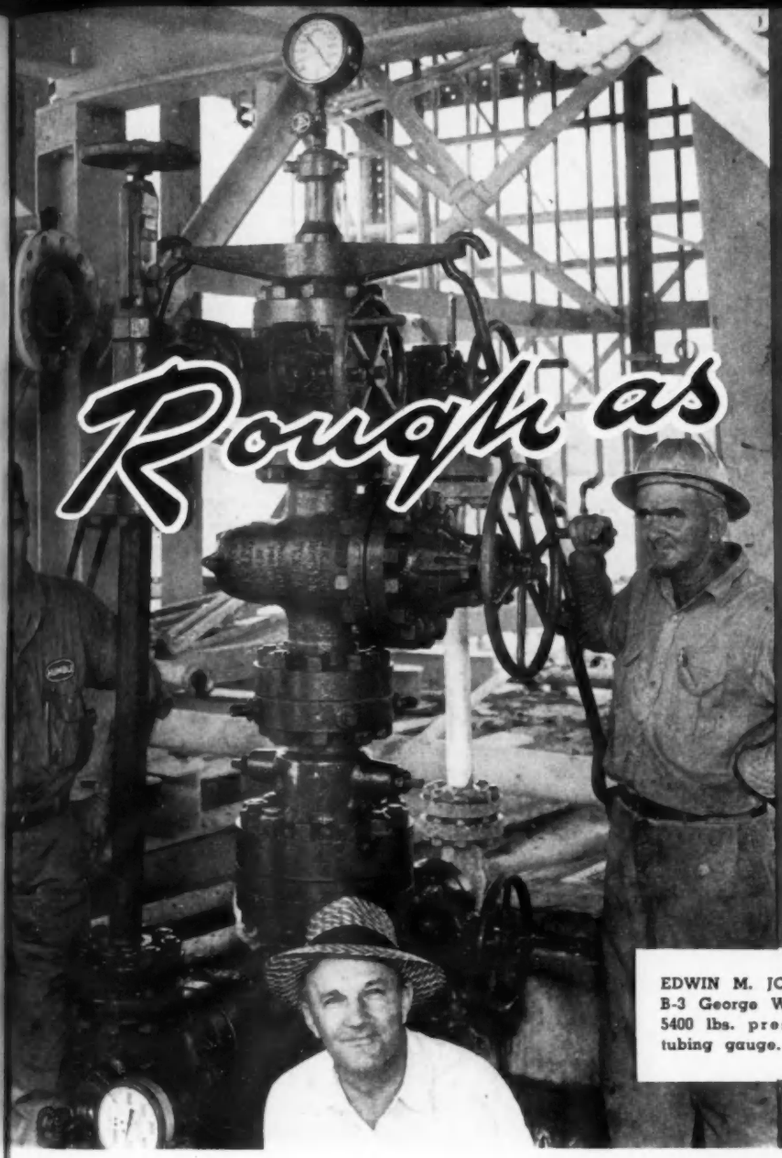
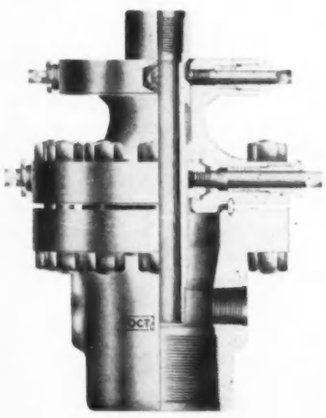


EDWIN M. JONES' No. B-3 George West. Note 5400 lbs. pressure on tubing gauge.

Rough as a Cob

TO DRILL AND COMPLETE BUT "JUST ANOTHER WELL" TO O-C-T COMPLETION CONTROL EQUIPMENT!

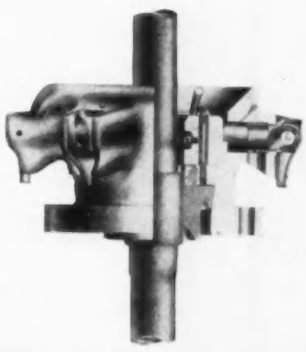
No. B-3 George West, deep Wilcox test in the George West (Texas) field, was completed in August as a gas-distillate well and subsequently abandoned. Nevertheless, the extremely high pressures encountered, and the numerous tests made prior to its abandonment established it as a most difficult problem well.



O-C-T Type T-20-F1 Run-Through Type Tubing Head.

The O-C-T 10,000-lb. Test Christmas Tree pictured above, together with an O-C-T Stripper Type Blowout Preventer (illustrated at right) enabled the operator to perform the prolonged completion operations "without a hitch."

The O-C-T Type T-20-F1 Run-Through Type Tubing Head (illustrated at left) permitted running gun perforators, tubing, and tubing hanger through the tree and washing the well into production. The tubing hanger, made up in the tubing string at a pre-determined point, was then raised to the suspension point and seated on the retractable hanger seats and locked in position. The O-C-T Stripper Type Blowout Preventer, installed above a ram type preventer, enabled the operator to make numerous round trips with the tubing in complete safety.



O-C-T Type J Blowout Preventer with stripper pack off.

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which the returns began to show up better."[3] Cattle, then, constituted the first mud guns, and the function of rotary mud was thus recognized at Spindletop. The period from 1901 to 1908 observed remarkable progress toward mixing a well-balanced drilling fluid. During this period of development at Spindletop, more research work was done along these lines than was done on the entire Gulf Coast between 1910 and 1928.

Primitive canvas packers had been used before Spindletop, but the first collapsible packer was introduced in 1907 for use in this field where high pressures were often encountered. The new packers packed off against the formation, and they, as other packers of the day, frequently failed to hold high pressures, but were valuable links in development of more practical packers.

In this early boom evolved use of a casing program employing graduated string sizes. The usual procedure was to place a rotary shoe on the casing and drill with the casing as a stem, until it froze. A smaller pipe, in turn, was used as stem until it also froze, then a third string was run. Wells frequently were started with 12-inch pipe and finished with 2-inch. Six strings were required to drill through troublesome formations, with all strings left in place to support the formation, protect the hole, and guard the flow string from the intense sulfidic corrosive condition that has always presented a problem at Spindletop.

The modern practice of swabbing to kick off oil wells and make them flow originated in the Spindletop field as a means to produce the large wells, many of which stopped flowing shortly after completion, although, in many cases, the fluid levels stood high enough to be seen from the surface. The wells were responsive to any sort of agitation, and when flow was once started, it would likely continue for several days. One of the first methods of swabbing to kick off flow involved the use of a rope, pulley, metal bucket, and fast horse. When the bucket was lowered to a suitable level inside the well, the horse, fastened to the rope attached at the other end to the bucket, was driven at a fast speed across the prairie, pulling the bucket from the well with a swabbing action. Wells were easily brought back on production in this manner; and this, with several variations, represents the inception of modern swabbing and kick off methods.

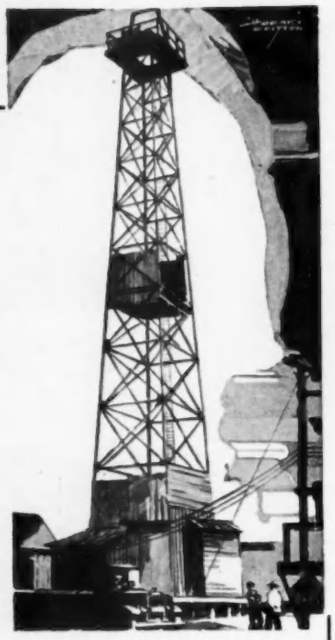
With demands for equipment to allow drilling to greater depths and in the face of higher pressures, mud pumps were improved over the earlier clumsy, gravity-operated circulation devices, and the first duplex, side-suction pumps were introduced. These makeshift pumps handled only a small volume of fluid and failed to operate satisfactorily at high pressures, but gave adequate service in the shallow wells. Likewise, the first steam engine manufactured by a leading oil-well-supply company was used at Spindletop, and for many years the engine, known as "No. 1", was kept as a relic in a field warehouse.

One of the earliest type rotary chain that is the forerunner of present chains was first used during Spindletop drilling. It was of malleable iron with large rectangular links which usually broke under hard usage. This type chain was later replaced by a steel rotary chain of much greater strength.

The first electric motor used to pump oil wells in any field was in-

[3] C. A. Warner: "Texas Oil and Gas Since 1543."

GREETINGS



Members of the Texas Mid-Continent Oil and Gas Association. We are proud that you have chosen Beaumont as the Convention city for this, your Twenty-Second Annual Meeting. Make yourselves at home, come around to see us if you have time and may we wish you the best of success during your session.

★

THE BEAUMONT CLEARING HOUSE ASSOCIATION

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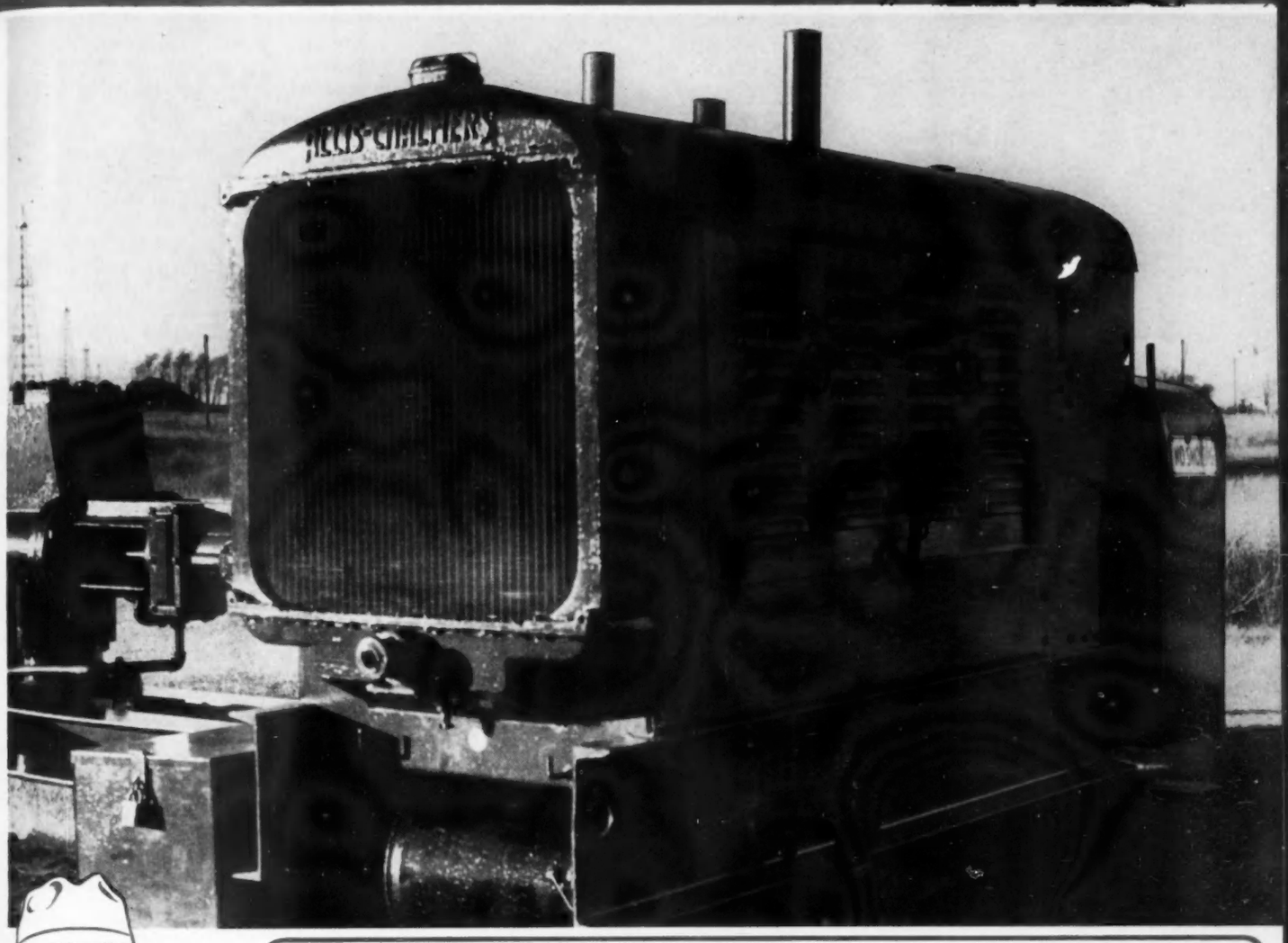
AMERICAN NATIONAL BANK

SECURITY STATE BANK & TRUST CO.

It's L for power and performance



It's a better buy for any man's money—More usable power!

Pound for pound—inch for inch—dollar for dollar, you can't match the continuous power output, high efficiency and low maintenance of the Allis-Chalmers Model L heavy duty power engine. For tough installations, such as *deep well pumping*, *multiple hook-ups*, *pipe line pumps*, and *continuous generator service* get an L—it's dependable.

CONDENSED SPECIFICATIONS MODEL L

Cylinders	Bore & Stroke	R. P. M. Operating Range	Torque Ft. Lbs.	Fuel	Clutch	Equipped With
6. replaceable wet sleeve	5¼"x6½"	600—1200	590	Natural Gas Gasoline Distillate	Dry Disc	Governor—Electric Starting Oil Filter—Air Cleaner

Write for Complete Specifications and Price

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Derricks still crowd each other in the Spindletop field today where many wells are still producing. In this section of the field are numerous steel derricks.

stalled at Spindletop by Unity Oil Company, and the original motor was used for many years by the operators in pumping shallow wells in the field.

The great amount of production taken from the Coastal fields, and the method of their production, along with their geological structure, all had their effect in inaugurating and advancing field, transportation, and refining methods. Artificial lift by gas or compressed air was attempted for the first time, the introduction of gas into the reservoir at Spindletop by artificial means being the first utilization of gas-lift so common today. Stronger equipment was introduced for use in completing the large wells, and new devices were manufactured for assisting in the control of wild wells.

With concentration of rigs in such a small area, the highest skill in petroleum engineering was required to rush completion of wells before competitors tapped the sand first, and the result was development of many new practices that are in common use today. As many as 500 wells were drilled on a single 5-acre lease, and at one time, as many as 100 rigs were running on this 5-acre tract, with drilling continuing at this pace for several weeks. With such close spacing and limited knowledge of production practices, many difficulties arose. Poor casing, rapid withdrawals, and heavy pump pressures had a ruinous effect on many properties. Dozens of the first producers were not properly cased, and sands that were originally barren were filled by oil migrating from lower productive sands, often wells being completed in these artificially saturated horizons. Many wells completed in these sands are still producing today. It was the result of knowledge gained during Spindletop's early development that conservation measures were adopted.

The success of Lucas at Spindletop set off dynamite to the then embryonic oil industry, furnishing the incentive and the consequent improved rotary drilling technique necessary for extensive exploratory drilling along the Gulf Coast, particularly on similar topographic features and long-suspected salt domes. In rapid order, such structures as Sour Lake, Damon Mound, Big Hill, and High Island were tested. Discovery of Spindletop is credited largely with subsequent discovery of fields during the next five years including Saratoga, Sour Lake, Batson, Humble, and North Dayton, and with their development arose not only need for larger and improved drilling equipment, but also extensions of pipe lines to handle the increasing production. By 1904, records indicate that the Southeast area in Texas produced 21,674,111 barrels from 650 wells.

This development and the extensions and enlargement of facilities to handle the increased production were accompanied by ever-increasing expenditures of capital. From a total industrial investment of approximately $4,000,000 in the Beaumont area at the end of 1901, it had increased by the end of 1904 to over $34,000,000. To demonstrate how closely this rise in industrial expenditures was allied with the booming oil exploitation, an analysis of distribution of investments shows that they were mainly comprised of money directly related to development of oil production and its distribution. The total investment was considerably larger than the actual value of the oil marketed during the period, giving evidence that the expenditures were predicated on the future of the area and growth of the industry.

The Second Spindletop

The boom began to subside in the fall of 1901, and development thereafter proceeded in comparatively orderly fashion. The country around Beaumont was punched full of holes with the expectation of tapping the great reservoir that was believed to exist. In the field itself, 500 wooden derricks crowded each other for position on 150 acres at the top of the dome.

Wells flowed for a few weeks or for a few months. A gas company was formed in 1901 to supply Beau-

Another Chapter has begun—

WITH *IMPROVED* UNAFLO

THE RETARDED OIL-WELL CEMENT

Down-the-well performance shows that *improved* Unaflo provides still greater insurance and an even higher factor of safety for oil-well cementing.

DESPITE your satisfaction with Unaflo retarded oil-well cement, recorded in a large increase in its use each year, the Universal Atlas Company has sought to make this good product a still better product. Today, a much *improved* Unaflo is in use with new advantages plus all the outstanding characteristics of the original product.

Oil men know that the original Unaflo, the first oil-well cement with a retarded set, performed successfully on all kinds of cementing jobs including the toughest jobs at any depth, temperature, and pressure, including delays on account of shutdowns and accidents.

They knew it so well that their use of Unaflo oil-well cement increased 2100% in six years. Nevertheless, the company's research engineers constantly sought to make this good product still better. And their success is your gain.

Improved Unaflo is much more uniform. Its curve of retardation is *smooth,* from the standpoint of cement down the well, of changing temperature, of the kind of mixing water used, of unpredictable hazards and delays in cementing. Thus, *improved* Unaflo offers you a still higher factor of safety—greater insurance against loss.

Unaflo, the *improved* retarded oil-well cement, is handled by representative dealers throughout the oil field. Use it to protect your investment in tools and well. Get it from your dealer.

Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Amicable Building, Waco; Oklahoma City; Kansas City; Chicago; Birmingham.

FEATURES OF *IMPROVED* UNAFLO—*As shown in the field and laboratory*

CHARACTERISTICS	ADVANTAGES	RESULTS
Composition *is more uniform;*	**Less mixing water** *is required for sustained pumpability;*	**Cementing economy** *is obtained by overcoming unpredictable hazards;*
Reaction to different mixing waters *on different jobs is more uniform;*	**Stronger, denser, more impermeable seal** *is obtained with heavier slurry;*	**Protection** *of your costly investment already made in tools, equipment, and well is greater;*
Retardation of setting time *under different temperatures is more uniform;*	**Fluidity** *is maintained regardless of well temperature or pressure;*	**Factor of safety** *is higher.*
Stiffening *of slurry is not merely "slow." It is delayed, postponed,* retarded. *It remains fluid and pumpable for period of retardation, then hardens normally.*	**Pumpability** *is maintained after shutdowns for extended periods.*	**Insurance** *is increased against loss in cases of unforeseen accidents;*

UNIVERSAL ATLAS OIL-WELL CEMENTS

Beaumont, already prosperous as a lumber and rice center, received added impetus after discovery of oil; rapidly became an important refining and shipping center. This modern view shows skyline and harbor, with Magnolia Refinery in background.

mont with a cheap and convenient fuel, but the rapid pressure decline warned the backers that the initial expense would probably not be recovered, so the system did not materialize. The gas had a high hydrogen sulphide content that overcame workers and killed one or more.

Oil production for 1901 was 3,593,000 barrels. In 1902 it reached a peak of 17,420,000 barrels, then declined to 8,600,000 barrels in 1903, and to 3,433,000 barrels in 1904. The decline from then through 1925, when the production was only 412,000 barrels, was gradual but consistent. With very few exceptions, Spindletop was considered dead, and the oil reserves rapidly being exhausted to the point where time of its value as a commercial oil field was limited. In January, 1924, Isaac Marcosson visited the once-great field preparatory to writing his history of oil, and in his published volume[4] stated what sounded like the death knell of the field in the following paragraphs:

"There was a time when Spindletop, near Beaumont, Texas, held the heart and hope of an oil mad world . . . The Lucas Gusher, the discovery well, as the first well in any field is called, was the wonder of the day.

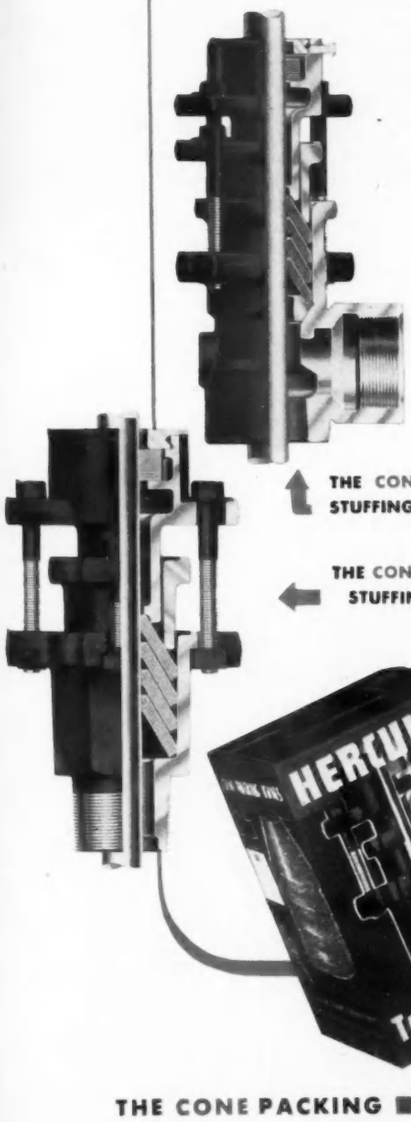
"Today, Spindletop is practically petered out. I went there to see the aftermath of what had been a scene of frenzied output. The 140 acres where 500 derricks had creaked in the golden age of the field were almost as still as a graveyard. From a few wells a trivial amount of oil was being pumped. Decay and desolation were the dominant notes."

However, during these years of gradual decline, one man retained faith in the possibility of finding deeper production at Spindletop and with it a revival of its former glory. That man was Frank Yount, president of Yount-Lee Oil Company, a man recognized as a deep-driller and one who had foreseen the deep flank production at Sour Lake. Yount possessed the same determination that led Lucas and Higgins to the discovery of Spindletop, and, despite skepticism of his friends, he had conviction that deep under the field lay a second oil reservoir. With help of Marrs McLean, who shared Yount's faith in finding deep production, a well was drilled on the same tract, the McFadden tract, as was the discovery well 25 years prior.

On November 16, 1925, citizens of Beaumont were electrified to learn that a gusher, McFadden 2, had been struck by Yount-Lee Oil Company on the southeast side of the old field. The well produced from 2588 feet, in contrast with wells formerly completed in shallow sands having an average depth of 1000 feet. The well was the first success after a number of failures to find the deep production, and initial excitement of its discovery was short lived. It was not until the same operator brought in another deep well, McFadden 3, on

[4] The Black Golconda, page 149.

Not 9 lives . . . . . but 15!



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★ Cone packing practically eliminates friction. Hercules packing will not burn out if well pumps-off. The need for wabblers is eliminated. No foreign lubrication is required. But most important to YOU, Hercules Cone Packing, in Hercules boxes, will outlast old-style ordinary packing FIFTEEN (15) TIMES . . . and we'll back up this statement with a guarantee of DOUBLE YOUR MONEY BACK if they don't. If you are not now using Hercules Cone Packed Boxes . . . investigate, for there is real savings in "15 to 1."

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NEXT TIME . . . .
ASK FOR THE CONE PACKED BOX!

HERCULES DELIVERS THE GOODS NOW!

January 13, 1926, flowing 5000 barrels daily through a choke, that people generally recognized that the impossible had been achieved—the great Spindletop field had come back!

A new drilling boom enveloped the erstwhile stagnated field. The year following the Yount-Lee discovery witnessed a drilling campaign reminiscent of the "old days," with derricks standing in some places within 15 and 20 feet of each other. Notwithstanding the revived interest in the old field, the second boom was not as wild as the original, attributable in part to the fact that large companies had moved in, in the meantime, and kept speculators in the background. Spindletop entered this second phase in an orderly manner, with anticipation of expecting a heavy yield for several years instead of allowing the rapid depletion as was the case with the old field.

In the first complete year of production after discovery of the Yount-Lee well, the field produced a total of 20,751,000 barrels, more than the total production during the 20 years immediately preceding, and which figure is listed as the production during the year of 1927. That production exceeds by far the great boom production in 1902 which amounted to 17,420,949 barrels.

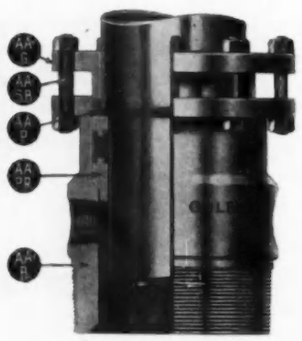
Development of deeper horizons has given Spindletop six productive sands, with depths ranging from 700 to 5900 feet. From these formations, accumulated production from time of discovery of the big field up to July, 1941, amounted to 126,372,971 barrels produced from 450 acres, or a per-acre yield of 280,828 barrels. This prolific field is comprehended fully only after relative comparison is presented with production from other outstanding fields. On the Texas Gulf Coast, fields having the greatest per-acre yield include West Columbia, in Brazoria County, credited with a yield of 205,400 barrels per acre, and Hull and Barber's Hill, in Liberty and Chambers counties, having respective production of 122,003 and 116,064 barrels per acre. The large Glenn Pool of Oklahoma, discovered in 1905 and covering 7000 acres, has a per-acre yield of only 29,102 barrels. In California, the Long Beach field overshadows Spindletop with a per-acre recovery of 405,092 barrels, although the next two most prolific areas, Santa Fe Springs and Midway-Sunset have per-acre recoveries of 68,101 and 19,002 barrels respectively. Figures stated for all fields with exception of Spindletop are based on the accumulated production from date of discovery to January 1, 1941.

In succeeding years after 1927, production from the Spindletop field declined gradually, despite occasional tests that are still being completed, and total production in 1940 fell to 602,265 barrels. With an estimated ultimate recovery of 135,000,000 barrels from the big field, the indicated remaining reserve amounts to 8,627,029 barrels of recoverable oil. Approximately 1300 wells have been drilled at Spindletop, but on January 1, 1941, there were only 161 wells producing; 13 flowing and 148 producing by artificial lift methods. The wells produced a total of 50,188 barrels monthly for a daily average of 1673 barrels during 1940.

Timeliness of the Spindletop discovery is attested by the early introduction of the automobile and other machines which were dependent on gasoline or other petroleum by-products for operation. A rapid swing over toward oil for fuel was noticeable after discovery of the product in such prolific quantities, and it was only a few months after uncovering the oil reserve that railroads constructed tracks near the field to facilitate obtaining oil for their own use, with several railroad companies quickly converting equipment into oil burners to reap benefits from the plentiful and inexpensive liquid fuel. An industrial Texas which previously existed only in the most fantastic dreams now became an actual possibility, for in this area where coal was lacking and so furnished an insurmountable obstacle to growth of manufacturing, here was uncovered wealths of liquid fuel that staggered the imagination. Texas, even the entire Southwest of today, with its active factories and highly developed industrial facilities, would never have attained present proportions except for the prolific petroleum deposits such as were unearthed at Spindletop.

Completion of the Lucas gusher was an event unparalleled in the history of the American oil industry, and it made American history in several ways. Production of a magnitude previously unthought of from any individual well focused the attention of the entire world on this well drilled by rotary methods. This well had a more profound influence on the course of oil development than any other single event, comparable with the momentous discovery of Colonel Drake in Titusville. A new era developed, the beginning of a new Century designating a golden age heretofore unsuspected, an age marked not only by advancements in petroleum technology but also by realization of the numerous uses of oil products, accompanied by perfection of machines made possible by its discovery in such abundance. Texas leaped to prominence and became the largest oil-producing area in the world.

GULFCO..
ACCURACY
Saves time on the lease
• • •
GULFCO Forged Steel
CASING HEADS...Type AA
2000 lbs., 4000 lbs., 6000 lbs. Test Pressures



This head is used where there is a possibility of a blowout while setting the bottom hole string of casing. The lower packing and packing rings are of one piece construction and are latched around the pipe and set as a unit. At the first sign of a blowout this packer can be set.

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WELCOME TO

BEAUMONT

MEMBERS OF TEXAS MID-CONTINENT OIL AND GAS ASSOCIATION . . .

"BIRTHPLACE" OF YOUR BUSINESS AND OUR "HOME TOWN"

MAY YOUR TWENTY-SECOND ANNUAL MEETING HERE PROVE TO BE BOTH PLEASANT AND PROFITABLE

DEPENDABLE
GULF STATES UTILITIES CO.
PUBLIC SERVICE

Where the latchstring is always out . . .

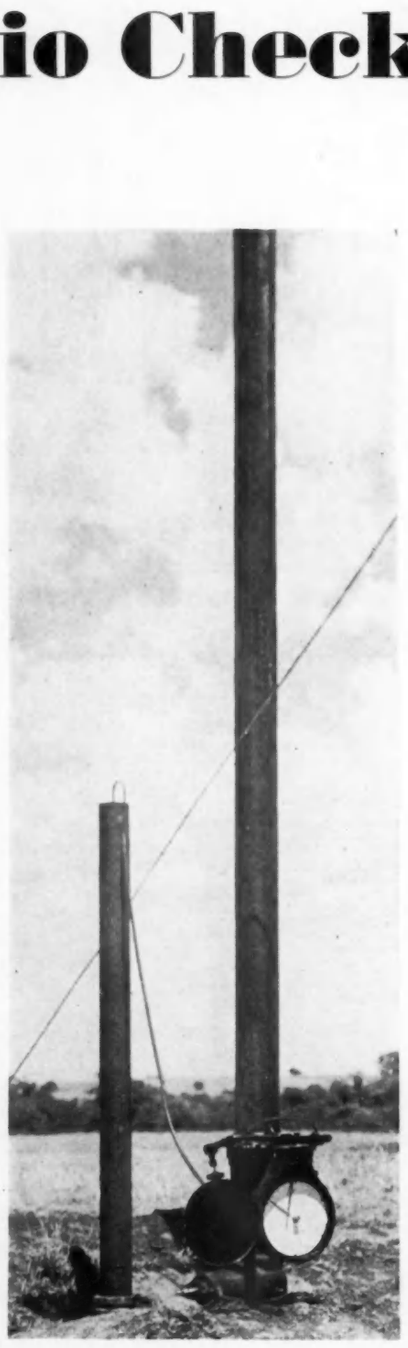
Easy Means Evolved for Constant Gas/Oil Ratio Checking

WHERE gas/oil ratios must be constantly checked to maintain an efficient and profitable production rate, it is pertinent that an accurate and continuous system of recording, measuring and separating oil and gas volumes be installed.

In the Guthrie pool, Logan County, Oklahoma, gas-measurement procedure is solved by means of a pitot tube and differential recording orifice meter on a Sunray Oil Company lease. The tube is bent in a curve at the upper end and inserted in a short section of 4-inch pipe. Gas is directed from the separator through a 25-foot section of buried pipe and released at the vertical 5-foot vent line. A rubber hose connection is effective between the bent metal tube and the orifice meter. A 24-hour continuous rotating chart is provided to record the changing differential.

An auxiliary 7-inch vent line, 15 feet in height, is available for exceptionally high gas capacities. The two vent lines are joined at base to the common carrier underground and a valve control has been inserted at base of larger vent line.

Through a six-way manifold system, wells may be tested individually for gas/oil ratio by directing oil flow into a smaller separator, or all wells may be flowed simultaneously through a larger separator. At this writing, four producers were flowing 65 barrels per hour through a ⅜-inch choke into the large 125-pound capacity separator. A special gas expansion chamber with dual pipe couplings are attached to the inlet flow line of the larger separator. This facilitates handling of large surges and volumes of gas as well as providing a knockout system.



Recording chart keeps record of check of gas/oil ratio on Sunray Oil Company lease in Guthrie pool in Oklahoma.

Oil outlet line extends to right of separator and oil drain at base directly below the outlet line. Anticipating additional producers on the lease, a bull plug connection between the present 6-well manifold system on a connecting line between producing wells and two separators, a similar manifold may be installed adjacent to the present unit to handle 6 wells.

Gas/oil ratios are constantly checked and choke size varied in order to secure the most profitable rate at which flow should be maintained. Slippage of gas will result if these factors are neglected and the full benefit of pressure reservoir conditions will not be had. At this writing, the orifice meter recorded a differential, which in converting into volume, measured 900,000 cubic feet of gas per day. A ratio of 500 cubic feet of gas per barrel of oil produced has proven desirable on the Donoghue lease of Sunray Oil Company. The latter company, Continental Oil Company and W. C. McBride, Incorporated, principal operators in Guthrie pool, have been granted permission by Oklahoma Corporation Commission to effect their own allowable in such a manner as to conserve reservoir energy and obtain the greatest ultimate recovery. A 10-acre spacing pattern is being followed.

Modern and neatly maintained equipment for gauging is further emphasized by 6 low 500-barrel flow tanks designed for gravity control with back pressure valves, thief hatches and vacuum relief valves. A fire wall and protective walks and guard railings are additional safety features. Vaporization losses are further prevented by application of aluminum paint.

Lucas Monument Dedication

Adds Interest to Mid-Continent Association

Program Arranged for Beaumont, October 9-11

DEDICATION of the Lucas gusher monument and a program of speeches by outstanding oilmen will feature the twenty-second annual convention of the Texas Mid-Continent Oil and Gas Association at Beaumont Thursday through Saturday, October 9-11.

Ralph K. Davies, deputy petroleum coordinator, will make his first public appearance in the oil country when he adresses the convention Thursday afternoon. He will discuss the priorities problem, coordination of drilling and production and other matters affecting oil.

Analyzing the international oil situation and its effect on the war strategy of the next few months will be Lord Marley, deputy speaker of the British House of Lords. Marley, who has traveled extensively in the war areas, will talk on "Oil and Victory: Some Economic Aspects of the War and the Importance of the Oil Factor" at the Friday morning session.

Other speakers at the general sessions include Jerry Sadler of the Texas Railroad Commission, at the Thursday morning meeting; Prof. George C. Hester of Southwestern University, authority on state and local government and taxation, at the Thursday afternoon session; John W. Newton of Beaumont, vice president of Magnolia Petroleum Company, who will give the address of welcome, and W. J. Rhodes of Breckenridge, president of the West Central Texas Oil and Gas Association, who will respond.

ALL OLD TIMERS INVITED

Invitations have been sent to many Spindletop pioneers but the Lucas Gusher Monument Association extends an invitation to all old timers and the general public to attend the dedication services of the Lucas Gusher Monument at Spindletop Thursday, October 9, between 4 and 5 p.m.

Dedication of the Lucas gusher monument on the site of the Lucas discovery at Spindletop will take place from 4 to 5 p.m. Thursday. The tall granite shaft, financed by contributions of oilmen through the Lucas Gusher Monument Association, is the largest memorial ever erected at the site of a Texas oil well or field. J. Cooke Wilson of Beaumont is chairman both of the monument association and of the Texas Mid-Continent convention committee.

Invitations have been sent to hundreds of Spindletop pioneers to attend the dedication, which will include interviews over the loud-speaker system with a number of them. The memorial address will be given by E. DeGolyer, national director of conservation for the petroleum coordinator, who was a friend of the late Captain Anthony F. Lucas and is winner of the Lucas medal awarded in honor of the discoverer of the Spindletop field by the American Institute of Mining and Metallurgical Engineers. The dedicatory address will be given by George A. Hill, Jr., of Houston, vice president for production of the American Petroleum Institute and son of a Spindletop pioneer. Music will include "The Lucas Gusher" written especially for the occasion and played by the Beaumont High School and South Park High School bands. Plans for broadcasting the ceremonies are being made, with the probability that at least the ceremonies from 4:30 to 5 p.m. will be carried on a network. All Spindletop old-timers have been invited for the dedication.

Carrying out the anniversary theme, the Texas Mid-Continent's annual wildcat jamboree Friday night will use a reproduction of the old shacktown at Spindletop as its setting. The early stores, offices, tool works, bars, etc., will be simulated life-size in the Harvest Club, with names of many men now famous in the industry again seen on the crude signs. Singing waiters, dancing barmaids and two floor shows will entertain the oilmen and their wives.

The annual oilmen's golf tournament will be held Friday afternoon at Beaumont Country Club. Twenty-two teams from all leading

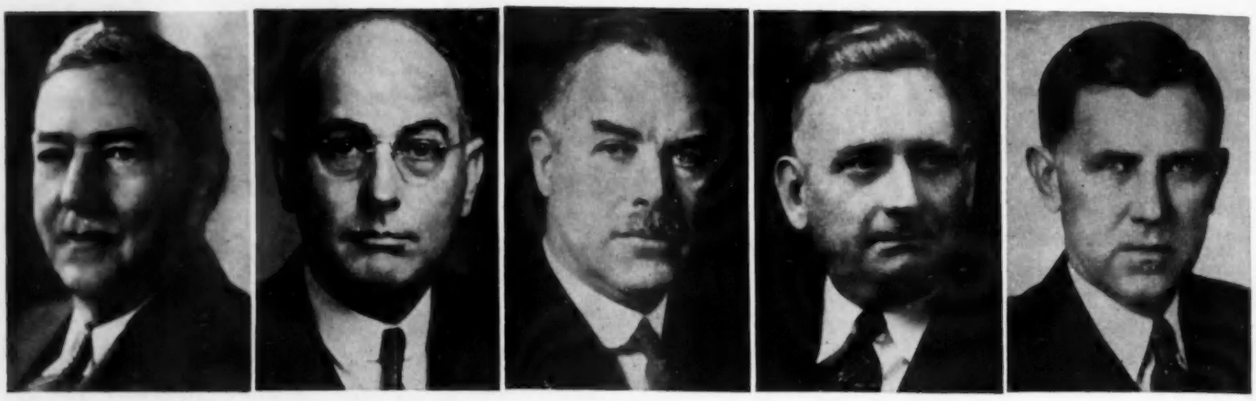
E. L. Smith

G. C. Gibbons

R. K. Davies

E. DeGolyer

G. A. Hill, Jr.



J. Cooke Wilson | J. W. Newton | Lord Marley | G. C. Hester | W. J. Rhodes

Texas oil centers will compete for the team awards as well as numerous individual prizes including the W. B. Hamilton cup.

A reception Friday afternoon for the oilmen not playing golf, and their ladies, and a boat trip Saturday morning through the Beaumont-Port Arthur industrial section will complete the entertainment program.

The meeting will spud in with the starting of a wildcat oil test in the heart of downtown Beaumont. A duplicate of the original rig which drilled-in the Lucas gusher has been assembled by a Beaumont committee headed by Scott W. Myers, and a replica of the Lucas derrick built from timbers of some of the early Spindletop derricks. Manning it will be a crew of Spindletop pioneers back for the anniversary celebration, who will put on overalls and gloves again to work a tour apiece.

A special meeting of the Houston Geological Society and the Gulf Coast Chapter of the American Institute of Mining and Metallurgical Engineers will be held Thursday night at Beaumont. Papers by Paul Weaver, president of the Houston society and J. Brian Eby and M. T. Halbouty will discuss the geology of salt domes in general and of Spindletop in particular. The discussion will be open to convention visitors. A supper will precede.

The distinguished service awards given by the Texas Mid-Continent Oil and Gas Association each year to two outstanding men in the Texas industry will be presented this year by George Sawtelle and L. P. Garrett of Houston. Names of the recipients are kept secret until the hour of presentation.

Committee reports will be presented by the chairmen as follows: Paul W. Pitzer, of Breckenridge, theft prevention; Dr. J. C. Karcher of Dallas, membership; Raymond Myers of Dallas, social security; F. T. Baldwin of Houston, wage-hour; Guy C. Tate of Dallas, forms simplification.

Officers of the Texas Mid-Continent Oil and Gas Association are: E. L. Smith of Dallas, president; George C. Gibbons of Dallas, executive vice president; Eugene McElvaney of Dallas, treasurer, and the following regional vice presidents: H. R. Cullen, Houston, Gulf Coast; B. G. Byars, Tyler, East Texas; J. L. Collins, Corsicana, East Central Texas; Charles J. Tucker, Wichita Falls, North, Texas; A. E. Herrmann, Amarillo, Panhandle; Paul C. Teas, Lubbock, West Texas; W. J. Rhodes, Breckenridge, West Central Texas, and Al Buchanan, San Antonio, Southwest Texas.

Advance hotel reservations for the Beaumont convention are the largest in the history of the association, it was reported. Invitations for the 1942 meeting are expected to be presented by Dallas and Corpus Christi, while Fort Worth, where the association met in 1940, will ask for the 1943 convention.

It's Just a Little Rough!

Brats with doting parents were never more thoroughly and systematically spoiled than the customers we've waited on hand and foot for thirty-three years. And so it gripes us like a kidney stone to see those same customers needing shoes, so to speak, that we can't furnish promptly and without red tape. It used to be that shoes could be half-soled if need be, for we have a plant—probably the oldest independent oil field shop in existence. Now, however, when raw materials are needed, some jackass wants to know what we did with what we had. If all this is essential to defense, we're for it. But our defense won't be very mobile without oil.

WE'VE SUPPLIED OIL MEN IN OUR AREA FOR 33 YEARS

PELICAN WELL TOOL & SUPPLY CO.

SHREVEPORT LOUISIANA

PELCO

Houston
Berwick
Houma
New Iberia
Magnolia

District Offices Handle All Material Priorities

CONSIDERABLE confusion and some complete ignorance exists among oil operators as to how to go about obtaining new materials and supplies now that it is necessary to get priority ratings.

On all new work, either in connection with producing or drilling operations, pipe lines, additions, alterations or new plant construction, the user must fill out a PD-1 request for a priority rating. This form, obtainable from Federal Reserve Banks, must be explicit in setting forth the materials needed, name of the supplier, and the relation of the use of the materials to national defense. A very important requirement is to show stock position, i.e. stock on hand, which means stocks of the particular commodity held by the requisitioner at any location and not merely in the field where the operation is being performed. The consumer, or oil operator, and not the supply houses must fill out the PD-1 request.

After the PD-1 request is filled out, it should be mailed or taken to the district office of the Petroleum Coordination. It is important that the request be sent to the district office, such as Houston for District 3. Delay will result if sent directly to Washington, as it probably will be referred back to the district office for recommendations.

After the district office has examined the case, recommendations are written on the request. These papers are sent to Washington by air mail, where they are considered and passed on by the priorities board. The board establishes a rating, and notifies the district office.

With the priority rating the oil company has two methods whereby material may be obtained. It may be procured from the supply house normally patronized, or in a case where the supplier is out of the material, a canvass of other equipment companies may be made. If a supply house has the material desired and it is not already covered by a priority rating, sales cannot be refused unless, of course, credit standing is not suitable.

Work Underway Previously

The petroleum coordinator's office, recognizing the fact that many wells or other projects were started prior to the issuance of the first orders, and as a result emergency necessities arise which will not await a delay of weeks or days, has obtained a concession from OPM whereby an emergency rating can be obtained. If such conditions arise, the emergency case should be wired to the district office which will forward it by telegram to Washington for prompt action. The telegram should explain where material is needed, time and reason for necessity, how much material is required, amount on hand, name and address of supplier. It is absolutely necessary that the telegram be followed with the regular PD-1 form sent by mail.

New Work

Wherever possible, OPC desires a project rating be given to new work. Project rating is for all the materials necessary for final completion, whether the drilling of a well, building a pipe line, or what not.

In cases of new work, it is well to take the matter up with the district office, either by letter or in person. When such information is given, the district office will assist in having a rating given to the entire project so that further PD-1 requests will be unnecessary.

In the case of cycling plants, gasoline plants, gas-return or pressure-maintenance units, a project rating should be obtained in all instances. The Petroleum Coordination office plans a separate memorandum pertaining to such projects, but it is not yet ready.

E. O. Buck and E. R. Brann, assistant directors of production for District 3, with offices in the Esperson Building, Houston, which includes the largest producing region in the country (Texas, Louisiana, Arkansas, Mississippi and New Mexico) explained that in requesting materials for wildcat wells special information is needed. An ownership map, showing location of well, county and state, should be attached to request, which should state depth of well, pay horizons expected, closest producing field, distance to nearest pipe line, railroad, canal or river.

New Producing Fields

In case a wildcat well should make a producer and open a field, Buck said, the operator will give all pertinent information to the district office, materials needed for development, etc.

The district office in turn will set up a project number or rating, prescribing the spacing pattern and the number of wells to be drilled on a particular lease. When the lease has been completely developed, Buck explained, the company's project number is cancelled, but may obtain another allocation to develop a second tract in the same field. In case of multiple sands in a field, "each different horizon must stand on its own bottom," he said.

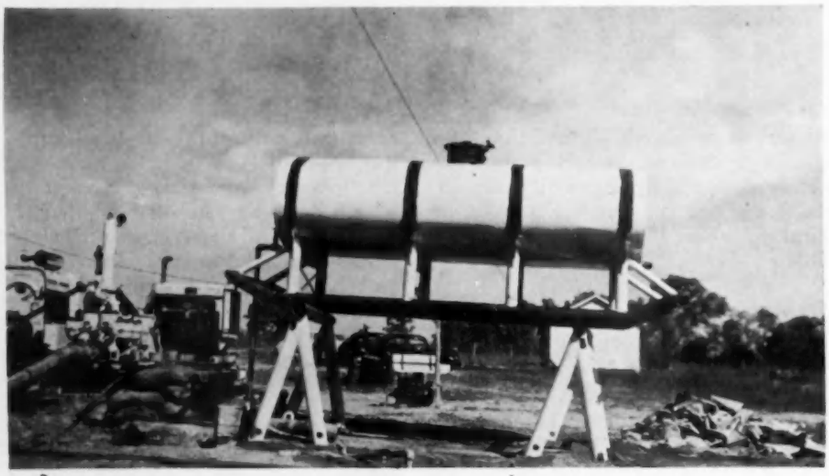
He cited a case in a North Texas multiple-sand field where an operator made a request for materials to drill shallow production in the heart of the field. So far the request has not been granted on the grounds there is no necessity for using new supplies where the oil may be obtained ultimately by perforating higher in wells that now are producing from deeper sands.

The OPC bulletin said all the foregoing information is given to assist producer or user and supplier and pertains to orders now in effect. There may be major changes at any time which will simplify the whole process.

Practical Operating Hints for

1. WATER SUPPLY

Elimination of Evaporation and Waste Improved by Use of Protected Tank



Converted fuel tank serves as make-up water container for Diesel rig, aluminum paint coating reducing evaporation losses.

COOLING water make-up, even on closed systems, is a problem on internal combustion rigs where local water supply is scanty and water must be trucked in.

Olson Drilling Company, on a slim-hole rig operating in the East Cromwell pool, Oklahoma, converted a 2000-gallon fuel tank to water supply needs by mounting it on a skid base of 6-inch pipe.

The tank is held on its base by four steel straps, passing through eyes and threaded clevises on the supports to enable tension to be put on them. The unit is painted aluminum to reduce the heat absorption of the tank and thus to cut down the evaporation losses as well as to provide cooler water than would be obtained otherwise.

2. CATLINE

Safety and Service Bettered by Device

PROTECTION for the cat line on a drilling rig is provided through a spool placed near the right rear corner of the drawworks. The device is in use on a rig being operated by Doug Corgey, Corpus Christi drilling contractor, in the Saxet field, and was constructed by welding a connection for a 2½-inch pipe to the grating near the base of the draw works. A 3-foot joint of 2½-inch pipe is connected vertically, followed by an elbow, in which horizontally is connected a short nipple. The spool is composed of two circular boards and a short piece of pipe. The spool is made up to the bracket on the rig by two halves of a union connected to each side of the spool and on the horizontal nipple. The rope is spooled upon the device when not in use. The right hand thread on the elbow makes it possible to turn the spool to the right, thus clearing the passage way between the draw works and the side of the derrick.

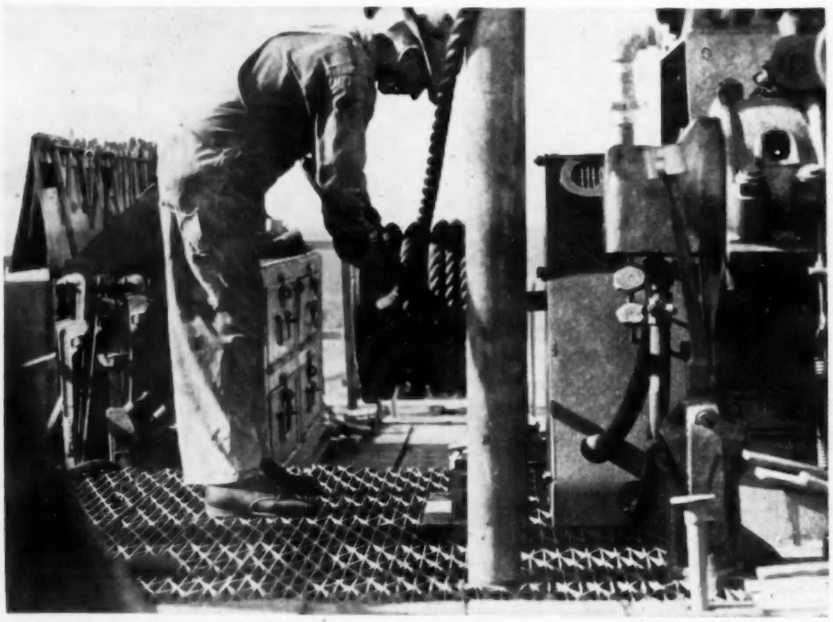
3. RIGGING UP

Sturdy Dual Use Post Conserves Floor Space

WELDED up from heavy I-beams, a combination back-up hitch and anchor point is provided which cuts down on the space and gear normally required for such work. The usual eyebolt through the top of the vertical member provides attachment for the tong line, while two small pulleys, to carry the kelly line and to direct it toward the cathead, are mounted just below the eyebolt and on the side of the upright.

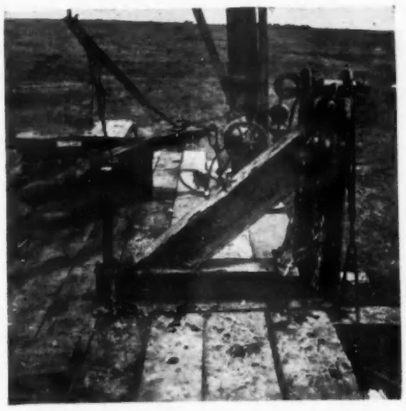
These two pulleys, each faced toward the direction of line travel, have one edge of their grooves in a common line so that the cat line travels through them and makes the desired change of direction with no chafing or rubbing against flanges.

To provide the desired rigidity against tong jerking, the post is



Stowage spool on pivoted stand behind cathead enables line to be kept clear of derrick floor except during actual periods of use.

THE DRILLING RIG . . .



Heavy channel steel forms sturdy back-up and catline guide hitch.

THE practical operating hints for the drilling rig and production man, appearing in these features each week, are secured from oil fields everywhere and offer suggestions that will help to improve field efficiency and safety. The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, THE OIL WEEKLY, Houston."

bolted to the floor and a short length of sand line, with a turnbuckle made up in it, is tied to the top of the post and carried to an anchorage below.

A heavy steel stub, welded at the outer end of the knee brace on the horizontal piece, provides anchorage for tong line or for retaining the end of a joint of drill pipe while cleaning and doping threads.

4. MUD CONTROL

One-Man Handling of Suction Hose Lifts

TO AVOID the hazardous procedure usually necessary to raise or lower the ends of mud suction pipes, several operators now employ various type hoists for their regulation, eliminating more cumbersome methods. One operator uses the conventional support made of 4-inch drill pipe held in place by two uprights of the same material, but with a geared hoist provided to make unnecessary the rotating of the horizontal pipe as is often required.

On one end of the pipe, easily accessible to the crew, is a worm-gear arrangement that manipulates twin reels on which are fastened wire cables, one for each suction pipe. Directly over the suction pipes at the mud pit, eyes are attached to the pipe, and through them are placed snatch block hooks. A steel cable is reeved through each block and through a small traveling block below, which in turn is fastened to a steel band clamped about the suction pipe.

A removable handle attached to the worm gear facilitates turning the gear, which rotates the reel to adjust line. Movement of cables through the snatch block and hoist regulates height of the suction. One man is able to handle the gears easily, and if the handle is removed when not in use, there is little likelihood that position of the pipes will accidentally be altered until desired, as the gears are self-locking and irreversible in action.

Twin worm-geared hoists provide ample leverage and positive locking for manipulating mud pump suctions and maintaining quality.

5. PIPE CARE

Vibration Cushioned by Wood and Wire

Spacing blocks and spiralled sand line provide standpipe anchorage.

DERRICK vibration and impulses in the standpipe from the strokes of the mud pumps tend to cause chafing of the standpipe and derrick structure at points of contact, sometimes amounting to sufficient to cause serious failure.

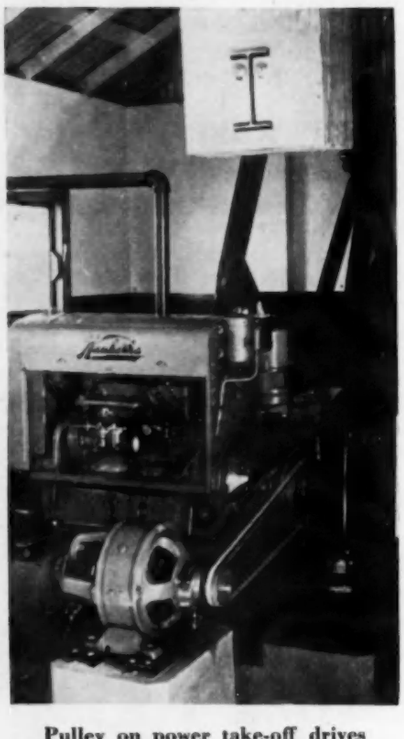
To provide a flexible yet adequate support for the standpipe, it is spaced away from the corner of the derrick by means of stops composed of heavy planking, braced and attached to the derrick girts at intervals. The standpipe is then positioned and held there by wrapping a length of sand line around derrick angle and pipe, making it fast with a turnbuckle in the line to permit the desired tension to be attained.

The slight amount of "give" in the edge of the spacers is sufficient to absorb pipe pulsations, and both standpipe and derrick are relieved of the stresses which otherwise must be counteracted in service.

Practical Operating Hints for

1. LIGHTING

Pump Engine Drives D.C. Generator



Pulley on power take-off drives slide-mounted current source.

PROVISION of occasional lighting needs at the loading rack when trucks must be loaded at night requires the installation of a separate plant when the operations are far removed from central station lines.

One operator, having a pumping unit close to the loading rack, took advantage of the 24-hour operation of the unit and installed a 2-kilowatt D-C generator on slide rails in line with an extension Vee-belt pulley on the drive shaft of the engine driving the pumping unit.

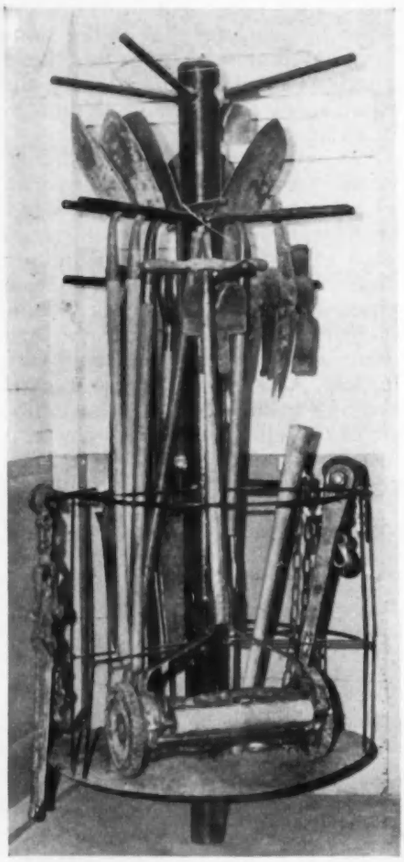
This unit placed no overload on the pumping engine, ample for the normal requirements of the well, and furnished current sufficiently uniform over the pumping cycle to be usable for lighting purposes. The use of direct current rather than alternating tended to absorb peaks in current output, the lag in filament change being more than enough to overlap any voltage changes in electrical output.

Use of the Vee-belt drive provides easy disconnecting of the equipment in case of desired overhaul, and setting of the unit opposite the drive to the pumping reduction gear tends to equalize, rather than augment, load on the power take-off bearings— *Geo. H. Hutchings, Cut Bank, Montana.*

2. TOOL CARE

Revolving Tool Rack Displays Equipment

PERMITTING ready inspection of and easy access to tools used by the production gang in maintaining yards and leases, United Gas Corporation has devised and is using a revolving tool rack.



Heavy spindle with platform and separating fingers carries tools.

The rack consists of a pipe standard, rigidly fixed in a corner by being set into the concrete forming the floor of the tool house, and sturdy enough to resist overturning if not evenly loaded, over which a larger section of pipe is slipped and on which it is supported by a ball or roller bearing.

A flat disc serves as base of the rack, it and the various pairs of parallel storage arms being welded to the outer or revolving section of pipe.

Lighter sections of rod used near the base of the rack serve to prevent shifting of shovel handles and other long objects carried on the heavier rods forming the upper supporting means.—*Courtesy United Gas Log Book.*

3. TIE DOWN

Embedded Wire Line Affords Anchorage

FUTURE needs of the production department in the pulling and servicing of wells were foreseen by one company at the time the production derricks were erected. In the concrete base of either of the two derrick legs nearest the pulling unit when it is in position at the well, a double loop of heavy drilling line was set at the time the concrete was poured.

In order to allow a slight amount of play in the loop, and at the same time prevent the cement on the top of the base from chipping off, the line was threaded through two short lengths of 2½-inch tubing before the ends were clamped together to form a loop. These two nipples were held in place and slanted slightly at the time the concrete was poured into the form.

While not in use as a deadline anchor during pulling operations, the loop may be held up out of the way by lashing to the derrick leg.

Protected by pipe sleeves, this wire loop is safe against damage.

THE PRODUCTION MAN . . .

4. ANCHORAGE

Chained Angle Iron Chocks Utilize Weight of Winch Truck to Increase Ground Grip

Chocks composed of heavy angle sections, attached to chains on truck bed, are held against slipping by weight of truck and load.

SKIDDING and hoisting of heavy equipment around the lease is being speeded up considerably by one West Texas company through use of a pair of easily handled chocks that firmly anchor the winch truck at the desired spot.

The chocks consist essentially of two 2-foot lengths of 4-inch angle iron, each connected to the truck by means of a sturdy chain, and which is lodged or wedged beneath the rear wheels. In one case the two chains were connected to the truck bed up near the power winch. When the winch starts to take up the load, the tendency for the truck to be pulled backward is held in check by the chocks which are held all the more firmly beneath the rear wheels, and which act as drags that prevent the truck from moving back bodily.

The chocks are thrown up on the truck bed between jobs, and since they are kept on the truck at all times there is little chance of their becoming lost as would be the case of ordinary wood blocks that are commonly used.

This type of chock is particularly suited to jobs where the winch truck is used in connection with a ground-anchored snatch block and gin pole, for shifting and loading of heavy fittings, pumping units, tanks, and other lease equipment.

5. TREATING

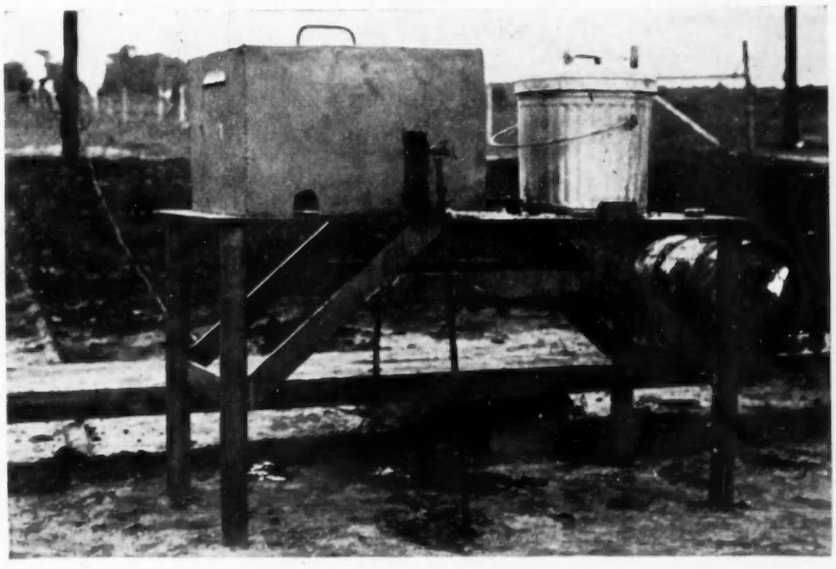
Elevated Stand Aids Chemicals Handling

AN OPERATOR using a small pump driven by an electric motor to inject chemicals into header for treating emulsified oil, erected a support for the chemical container and electric motor and pump, constructing a steel cover to protect the latter from the elements and from accidental injuries.

The table is 3 feet high, with legs made from 2-inch tubing. A flat ¼-inch steel plate comprises the top, with dimensions approximately 2½ x 6 feet. Cross bracing of flat steel strips welded to legs and top strengthen the structure.

Four steel blocks welded to the top of the table designate the place where the chemical container bucket is set, and hold it firmly in place to prevent dislodgment by vibration. The electric motor and pump are also fixed permanently to top of the table. A ½-inch pipe connects the chemical bucket with the pump, the pipe going vertically to the ground, where it levels off and is buried as it traverses the distance to the header where chemicals are injected for mixing with the stream of the oil through the production flow-line.

A steel box with open bottom and a handle on top for easy removal is placed over the pump and motor for protection, and is constructed of flat steel plate and welded at all joints. Slots placed at proper places facilitate placing the box over the electric cable to the motor and the several small pipes. Handle welded to top of the box simplifies lifting for removal when necessary to repair mechanism inside, or as keeper for chain if protection is required against vandals.



Welded steel cover, notched for lines and equipped with handle, protects this motor-driven chemical feeder and prevents damage.

See how these specially-designed wooden racks keep Bethlehem Sucker Rods in perfect alignment, free from bends and strains. It's quick and easy to stack and re-stack rods this way, too.

LOOK at this extra value

you get with BETHLEHEM SUCKER RODS

At first glance, this simple wooden rack may seem of small importance. But ask any producer who has used it how valuable it is . . . how it simplifies packing and safeguards rods against bends and kinks.

When sucker rods are shipped from the Bethlehem plant, they are carefully packed on these racks in bundles which are braced, tied, and anchored. When the rods are transferred to your truck and again to your stocks, each time they can be neatly, quickly, and safely re-packed—thanks to these racks. And again, during well servicing, these racks can be used to protect the string from costly damage.

You get other plus values with Bethlehem Rods

Bethlehem X Mayari Sucker Rods have proven themselves well suited for heavy pumping duty in corrosive wells.

And remember this: Bethlehem rods are more reliable, more uniform in quality because they are made, from iron ore to finished product, by one closely-knit organization, under the eyes of one group of metallurgists and engineers.

BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY

HIGHLIGHTS IN THE WEEK'S NEWS

Allowables

Phillips Calls Compact Meeting October 16

Governor L. C. Phillips of Oklahoma, chairman of the Interstate Oil Compact Commission, has called the next quarterly meeting of the commission to meet in the Blackstone Hotel at Fort Worth, at 10 a.m., Thursday, October 16.

Members of the commission and its legal, engineering and regulatory practices committee, are scheduled to meet in Fort Worth, October 15 for committee meetings. The committee on compact activity and the by-laws committee will make their reports on October 16. The legal, engineering and regulatory practices committees will have a joint meeting Wednesday and work out plans for a consolidated report to be published in one volume.

Formal program has not yet been completed. Harold L. Ickes, petroleum coordinator, has been invited to attend and address the meeting or to send representatives. It is expected that Robert E. Allen, director of production, Office of Petroleum Coordinator, will attend and address the meeting on "Steel Priorities." E. L. DeGolyer, director of conservation for OPC, is expected to attend and speak on "Conservation." Dr. A. G. White of the U. S. Bureau of Mines has been invited to discuss the current supply and bureau forecasts of demand.

The oil and gas committee of the Fort Worth Chamber of Commerce will be in charge of arrangements for entertainment. One entertainment will be a dinner at the Riverside Country Club at which Governor Coke Stevenson of Texas will preside.

Hearing on East Texas Salt Water Set for October 6

A hearing has been called by the Texas Railroad Commission for October 6, to receive evidence on the effect of salt water production on the reservoir pressure in the East Texas field, and the ultimate recovery of oil from that field. The commission will then determine whether or not "additional orders should be promulgated to encourage reinjection of the salt water produced from said field to the horizon from which it is produced."

At a hearing set for October 7, the commission will consider an amendment to Rule 2, relating to the casing program, governing the Long Lake field, Anderson, Freestone and Leon counties.

Ask Change in Spacing Multiple-Sand Rincon Field

A new plan for operation in the Rincon field, Starr County, was advocated by Continental Oil Company at a Texas Railroad Commission hearing last week. The field has several producing sands, to which separate wells are being drilled. The spacing rule provides that wells may be drilled 330 feet from lease lines and 933 feet apart. This rule applies to surface locations, and in the event wells are drilled at closer distances, then each well so drilled becomes an exception to Rule 37, and requires a separate hearing and proof that it is necessary.

Continental Oil Company sought to avoid these hearings by revising the spacing rule to allow wells to be drilled 660 feet apart. Engineers for the company pointed out that although the surface locations would be closer together under such a plan, the bottoms of the holes would be further apart since adjacent wells would be drilled to different horizons. This is the first request of its kind that has come before the commission.

Premont Field in Jim Wells County Gets Spacing Rules

Optional 20- or 40-acre proration units for the Premont field in Jim Wells County are permitted in an order issued last week by the Texas Railroad Commission.

No well shall be drilled for oil or gas nearer than 800 feet to any other drilling or completed well on the same lease, nor less than 330 feet from any property line.

Proration is fixed on an acreage and per-well basis with 50 percent on each factor. No unit, whether 20 or 40 acres, shall be in length more than twice its width, except when the width of the unit includes the total width of the lease. A tolerance of 10 acres may be assigned to the last well on a lease, provided there remains in the lease, after all other wells have been assigned their full acreage credit, a total of less than 20 acres. No tolerance shall be granted to any unit formed by the consolidation of two or more leases.

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Associations

The program for the Fall meeting of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers, to be held in the Adolphus Hotel, Dallas, Texas, October 16, 17, and 18, has been announced as follows:

Thursday, October 16

10:00 a.m.—Grand Ballroom. E. A. Stephenson, chairman; T. V. Moore, co-chairman.

Address by John R. Suman, president of the Institute.

"Sampling Gas Wells That Produce Condensate to Determine Chemical Composition and Phase Characteristics," by J. M. Flaitz and A. S. Parks.

"A Chart to Provide Approximate Correction for Temperature and Deviation from Boyle's Law," by A. D. Brokaw.

1:30 p.m. — Grand Ballroom, J. U. Teague, chairman; R. O. Garrett, co-chairman.

"Secondary Recovery Program at Oklahoma City," by Dr. D. L. Katz, University of Michigan.

"Practical Application of Productivity Indices," by W. L. Horner and James A. Lewis, Core Laboratories, Inc.

"Potential Well Testing Technique by Back Pressure Methods in Kansas," by Charles Rodd, Gulf Oil Corporation.

"A Comparison of Marsh Funnel and Stormer Viscosities," by J. E. Owen.

"Natural Gas Hydrates," by Don B. Carson and D. L. Katz, University of Michigan.

6:00 p.m. — Chartered busses leave from main entrance of Adolphus Hotel for home of Mr. and Mrs. E. DeGolyer, "El Rancho Encinal." All who have registered and their wives are invited to attend as the personal guests of Mr. and Mrs. E. DeGolyer. Admission by invitation only, which will be supplied at time of registration.

Friday, October 17

9:00 a.m.—Grand Ballroom. N. N. Jones, chairman; C. H. Keplinger, co-chairman.

"Significance of Permeability Coefficients," by E. S. Burnett, U. S. Bureau of Mines.

"The Unsteady Flow of Gas Through Unconsolidated Sand," by Charles R. Hetherington, D. T. MacRoberts, and R. L. Huntington, University of Oklahoma.

"An Engineering Approach to the Gas Lift Problem," by C. E. Tweedle, Coastal Engineers.

"The Use of Dimensional Models in the Study of Oil Well Performance," by M. E. True and M. C. Leverett, Humble Oil and Refining Company.

1:30 p.m.—Grand Ballroom. H. F. Beardmore, chairman; S. E. Buckley, co-chairman.

"The Use of Electrical Resistivity Logs to Determine Some Reservoir Characteristics," by G. E. Archie, Shell Oil Company, Inc.

"The Fitts Pool," by K. R. Teis, consulting engineer.

"The Relation of Linear Permeability to the Specific Productivity Index," by

Frank M. Pool, Texas A. and M. College.

"The Evaluation of Oil Properties," by W. H. Burke, Shell Oil Company, Inc.

"Pressure-Hydration Relationships in Heaving Shale," by H. H. Power, Barnaby L. Fowle, and Joseph B. Plaza, University of Texas.

7:00 to 7:45 p.m.—Cocktail party for all who have registered and their wives as the guests of the Dallas Petroleum Club.

8:00 p.m. to Midnight—Informal dinner dance in Main Ballroom of Adolphus Hotel for all who have registered and their wives. Tickets must be purchased at registration desk before noon, Friday, October 17.

Saturday, October 18

9:00 a.m.—Grand Ballroom. "Forum on Reservoir Performance."

This session is sponsored by the Production Engineering Committee, of which A. W. Walker is chairman and who will preside at the session.

"Production Under Effective Water Drive as a Standard for Conservation Practice," by E. DeGolyer, E. DeGolyer-MacNaughton and McGhee.

"A Study of Edgewater Encroachment in Petroleum Reservoir Sands," by Frank G. Miller, U. S. Bureau of Mines.

East Texas API Chapter Meets at Kilgore October 7

East Texas Chapter of the American Petroleum Institute will hold its fall meeting at 8 p. m. October 7 at Kilgore. E. B. Miller, Jr., chapter chairman, will lead a discussion on "Salt Water Problem in East Texas." In response to requests, the chapter has made its facilities as a forum available for opinions on the problem, considered one of the most important in East Texas.

E. O. Buck, of Houston, assistant director of production District 3, Office of Petroleum Coordinator, will give a 10-minute talk on the defense setup as it relates to the oil man. A dinner will be held before the meeting. D. M. Kerr is secretary-treasurer of the chapter.

Southwest API Meets in Dallas February 26-27

The 1942 spring meeting of the Southwestern District, API Division of Production, will be held in Dallas, Texas, February 26-27, 1942, it has been announced by E. P. Hayes, district chairman.

The committee appointed to arrange the program includes:

R. O. Garrett, Arkansas Fuel Oil Company, Shreveport, chairman; E. O. Buck, Houston; D. V. Carter, Magnolia Petroleum Company, Dallas; B. C. Craft, Louisiana State University, Baton Rouge; F. E. Heath, Sun Oil Company, Dallas; H. B. Hill, Bureau of Mines, Dallas, and J. H. Rambin, The Texas Company, New Orleans.

It has been requested that suggestions on topics and speakers be addressed to the chairman of this committee.

JOHN J. PATTERSON has been added to the engineering staff of the Texas Railroad Commission, District 3, Houston. A. J. Smith, petroleum engineer, has been transferred from Houston to commission offices at Pampa.

Washington Roundup

[*Continued from page 13*]

tion gasoline for Lend-Lease purposes, it got no bids. Foreign demand for September, for 100-octane, was equal to our entire American production for that month. Obviously we cannot begin to fill these orders for the nations fighting Hitler and still supply our own needs. And if we don't supply England and Russia, and others that are in our first line of defense, where will they get their 100-octane gasoline?"

Another problem, he said, is in production, where priorities already have made it difficult for new wells to be opened and old ones to be kept producing.

"Therefore, and I say this with the greatest possible respect," he told the committee, "I am not going to be diverted from the main objective. So long as I possess a mandate from the President to do this petroleum job, I shall do it to the best of my ability.

"That is why I regret that you have made statements which have given the public a wholly unjustified attitude of complacency. I beg of you, solemnly, to understand that we simply do not dare to make our plans on a basis of 'barring completely unforeseen events.' We cannot afford to gamble with the future."

Summing up the situation, Ickes said an additional 3000 to 5000 tank cars will be released with the end of the road-building season, and will be used, but not more than "3 or 4" of the 22 tankers in South and Central American ports will be available.

"Always Wait Until Too Late"

"The record of this nation with respect to foreseeable shortages in essential materials is nothing to be proud of," he commented. "In every case, up to date, we have waited until it is too late. We have gone on, fondly believing that shortages could not exist, until we found ourselves unhappily in the midst of a shortage.

Before he left the stand, Ickes reverted to the charge that Davies was still drawing company salary and did not deny it. But, he said, it would be unfair to a man who had served a company many years to force him to give up the results of his work simply because he joined the government in an emergency. Paying tribute to the sincerity and ability of his deputy, Ickes told the committee that there was an understanding that Davies would not participate in any matters in which his company had an interest.

Pelley Answers

Ickes' challenge of the figures of the railroad association was met by Pelley October 2 with an iteration of the statement he gave the committee on September 3 that there are 20,000 cars available and 200,000 barrels of oil a day can be moved to the coastal region.

Because Ickes had charged his original testimony was not under oath and not to be credited, Pelley asked to be sworn. The oath was administered by Senator Barbour after Chairman Maloney confessed that he had never sworn a witness and did not know how to do it.

Pelley told the committee that at the time of his last appearance approximately 15,000 barrels a day were being moved by rail, and that in the intervening month, the movement has increased to about 80,000 barrels a day, the additional 65,000 barrels requiring the use of some 4000 tank cars.

"Although about 4000 cars have been assigned to the Atlantic seaboard oil service since I appeared before your committee," he said, "there still remained on last Saturday, September 27, a surplus of substantially more than 20,000 cars, over and above a supply ample to take care of loadings for two days.

"Among the scheduled movements which have been arranged since I was last before you are movements of crude oil, fuel oil and gasoline from producing areas and pipe-line terminals in Texas, Oklahoma, Illinois, Indiana, Kentucky and Mississippi to refineries and consuming points on the eastern seaboard from Florida to New Hampshire."

It was pointed out by Senator Burton that the coordinator's estimates of factors reducing the deficiency from 350,000 to 174,500 barrels a day included an estimate that some 73,000 barrels a day average would move by rail, during the current quarter, involving the use of some 10,000 cars, and asked whether the railroads could

furnish cars in addition to that number.

"Eleven oil companies obligated themselves to use tank cars," Pelley explained. "I am more confident than ever that my statement to you was very conservative, confirmed by this check of last Saturday which shows where the cars are, and I repeat, we will have no difficulty in moving 200,000 barrels of oil a day."

Trucks and Barges

Chairman Maloney read into the record a telegram from H. Heywood Robbins, Charlotte, North Carolina, to Senator Bailey of that state, saying applications are pending before the Interstate Commerce Commission for emergency truck operations east of the Mississippi which, if granted, could free 20,000 tank cars from short-haul service.

He also called Ralph D. Moores, Portland, Oregon, who had asked an opportunity to present a plan for the construction in that city of wooden barges equipped with U-shaped tanks coated inside with plastic, which could be moved by tug, in strings of three. Each barge would carry 30,000 to 35,000 barrels of oil, and could bring a cargo East through the canal if oil was available and then be placed in the Gulf-Atlantic service.

Moores said he had conferred with the coordinator and with OPM and Maritime Commission officials. The first two were interested, but the Maritime Commission is opposed to wooden ships at this time. He said also he had conferred with officials of two oil companies in New York, who thought the plan feasible and practical but felt the government should finance it. He admitted he was looking for government assistance in setting up the shipyards and hoped some government agency would take the boats over for operation.

Maloney Not Convinced

At the conclusion of the hearing, Chairman Maloney said no further report would be filed with the Senate at this time.

"I see little change in the situation since the committee submitted its preliminary report," he explained. "It appears to me that what change, if any, has occurred, has been an improvement in the situation. On the basis of information made available to the committee, I feel that the shortage, always barring unforeseen events, should be quickly overcome."

Because of the number of varied proposals and the wide range of problems presented with them, the Maritime Commission is not expected to make any announcement with respect to concrete barges before the latter part of the week.

According to sources close to the commission it is understood that proposals to build the vessels have come from everyone even remotely connected with the concrete business, and that considerable time will be necessary for the commission to segregate the feasible proposals from those which must be discarded.

It is not intended at the present time that these barges, if constructed, will be used in other than the Great Lakes and coastal service, although one company is reported to have submitted a proposal for the construction of ocean going barges.

Pennsylvania Prices

Approval of the Office of Price Administration of the increases in the prices of Pennsylvania crude which it ordered canceled August 23, is expected to follow consideration of a brief filed by the producers setting forth the factors underlying the proposed 23-cent advance.

The major contention of the brief was that maintenance of prices at a level high enough to encourage secondary recovery of oil would result in a large increase in the producing capacity of the Pennsylvania fields.

"It is believed this increase in producing capacity will do more to hold prices at an economic level than the imposition of a price ceiling which will not encourage expansion," it was explained.

The brief included results of a survey of the Pennsylvania industry which showed that there are 15,000 individual operators in the state, and 26 refineries with a capacity in excess of 90,000 barrels a day. The recoverable reserves of the district are placed at 932,856,000 barrels, of which 107,000,000 barrels are in New York, 232,216,000 barrels in West Virginia, 60,000,000 barrels in southeast Ohio and the remainder in Pennsylvania.

The producers asserted that the increase which the OPA rejected was not inflationary, but was made for the purpose of stimulating supply and was in accordance with general commodity price levels currently existing.

Moffett on Tankers

Asserting flatly that there is no shortage of oil, James A. Moffett, chairman of the board of the California-Texas Oil Company, asserted on October 3 that efficient use of tank cars would more than provide the amount declared deficient by the coordinator.

At the same time, Moffett charged that "the way tankers are now being operated for the British threatens to leave the Pacific Coast and the Pacific fleet with a dangerously disrupted operation" and demanded immediate return of six of the ships already transferred, to prevent a Pacific shortage.

He pointed out that in 1917, 30,500,000 tons of oil products were moved with 57,000 tank cars, but in 1940 only 60,000,000 tons were moved with 148,000 cars. "If we were now doing only as well as we did in 1917 we would be moving 80,000,000 tons a year instead of 60,000,000 tons," which would mean an extra 383,000 barrels daily, he asserted.

Reviewing the situation which led to the transfer of tankers to the British service, Moffett charged the ships are being used for the movement of grain and other materials, that crude was being transported to the United Kingdom instead of the refined products into which it would be converted, and that turnaround has been slowed up by the securing of oil from distant points.

"We now have a threatened, and probable, shortage on the Pacific Coast for the reason that in withdrawing tankers from the American operators to meet the requirement of the British, the Pacific Coast owners and operators were obliged to contribute a greater percentage of their original tonnage than the East Coast operators and, on top of this, were obliged to load other ships for aid to Russia, with the result that the Pacific Coast operators have contributed 38 percent of their total tonnage to war-aid purposes, while the Atlantic seaboard operators contributed but 18 percent," he declared.

Wants Six Tankers Back

"It seems to me that it is more important to maintain fuel supplies on the Pacific Coast than on the Atlantic seaboard in view of the fact that the main part of the

American fleet is stationed in the Pacific and the general political situation existing in that area. I am convinced that there has been ample time since April to put the tanker operation and the supply position on a highly efficient basis and, such being the case, that the tankers loaned to the British can be and should be gradually returned to the American operators. I believe that at least six ships can and should be withdrawn from the shuttle service for the Pacific Coast alone and that other tankers gradually can be withdrawn to supply the Atlantic seaboard's domestic requirement.

"I further believe if we are to secure the utmost efficiency that a division of authority pertaining to tanker operation is bad and that Admiral Emory S. Land and the Maritime Commission know more about ships and the operation of ships than the Petroleum Coordinator's division, and I, therefore, feel that the Maritime Commission should have full authority in respect to the allocation and operation of tankers and there should not be the division of authority as is the case today between the Maritime Commission and the Office of the Petroleum Coordinator. I further feel that London should not have full control over foreign-flag ships which are owned 100 percent by American corporations, as it may be found that some ships are carrying supplies to other markets less important than the transporting of supplies for the consumption of the United States and the United Kingdom.

"In connection with the controversy over the construction of a pipe line from Shreveport to New York, I hope that this is finished once and for all. As Admiral Land stated in his testimony at the hearings of the special committee of the Senate, barges can be constructed with much less steel than would be required for the construction of the pipe line and which would make an equal great amount of deliveries to the New York harbor and Philadelphia terminals, and in a shorter space of time."

Pipe Line

An executive proclamation issued by President Roosevelt October 1 imbued the Portland Pipe Line Company with the right of condemnation under the Cole Act, to expedite construction of the pipe line between Portland, Maine, and Montreal, Canada.

The line will require a 100-foot right-of-way and certain areas for the location of storage tanks.

New Rationing Formula

Application of the 10 percent cut in deliveries in the East Coast states in October, under the new formula outlined a week ago, was ordered by Donald M. Nelson, chief of the priorities division of OPM, September 30, in which deliveries, set forth by states, will range from 84.42 (in Virginia) to 93.03 (in Vermont) percent of the average deliveries during May, June and July, and from 92 (North Carolina) to 100.5 (Rhode Island) percent of average deliveries in October, 1940.

The new formula, it was said, is exploratory in nature, and recommendations will be made before the end of the month by the coordinator, for such further revision or continuance of the curtailment as he may deem necessary.

"Meanwhile," said the coordinator, in explaining the new order, "my office is surveying the supply situation in several of the southeastern states and in some regions contiguous to the western borders of the whole Atlantic Coast area where it seems likely that other modes of shipment may shortly wholly supplant movements heretofore made by deep-water tankers. In such instances, and in the absence of intervening factors, it is my present view that whenever the facts disclose that any such states or regions are no longer dependent on tanker transportation and are securing sufficient supplies by alternative methods of transportation, I shall desire to recommend either a contraction of the boundaries of the area of restriction or a relaxation of these restrictions in such states or regions."

The new formula, it was said, will make an overall 10 percent cut in deliveries, but in such a way as to provide for seasonal or emergency requirements.

A feature of the order is the extension of curtailment to delivery trucks and taxicabs, heretofore exempt.

The restrictions originally imposed by Ickes on August 15 were given the unqualified support of the OPM.

"In my opinion," Nelson said, "such a preventive program for conserving gasoline in the area of threatened shortage of vitally necessary products should be continued until that threat has been positively eliminated. Now is the time when storage must be filled to meet the peak demand for total petroleum products which occurs not in the summer but in the winter.

"Because there exists a greater margin of profit in gasoline as compared with fuel oils, unless gasoline consumption be curtailed refiners are likely to continue to utilize too large a proportion of our limited tanker tonnage to ship gasoline to the Atlantic Coast and thereby leave insufficient tonnage to move the necessary amount of fuel oils. Fuel-oil consumption can hardly be curtailed at all without risking the disruption of both defense industries and essential civilian activity.

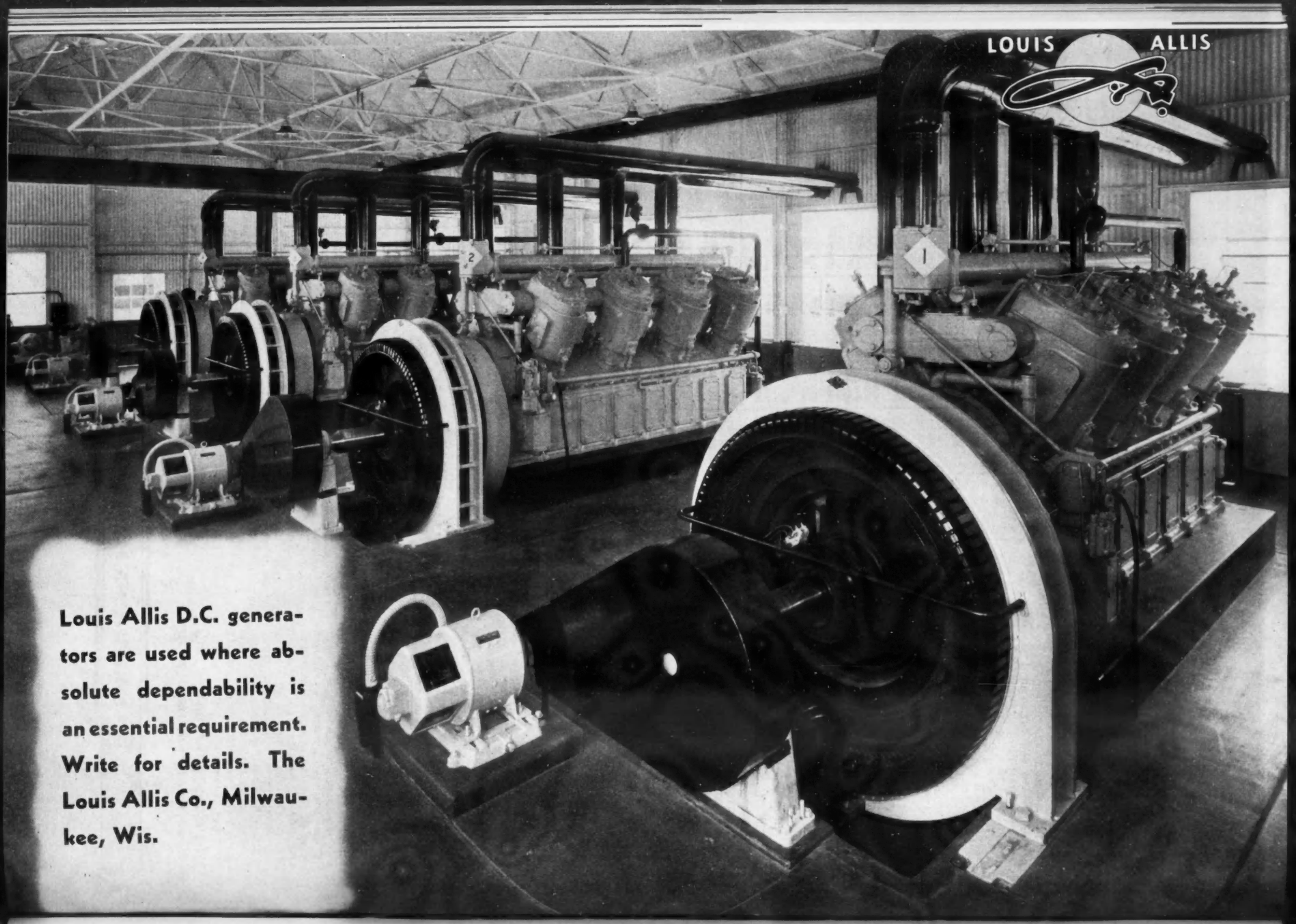
"Gasoline consumption, however, can be curtailed without undue hardship if such curtailment is commenced soon enough and spread gradually over a sufficiently long period to avoid the imposition of a drastic cut. That is why I so strongly recommend the continuation of the very moderate curtailment in the deliveries of this product already instituted as a hedge against an uncertain future."

Allocations, by states, will be as follows for October:

States	Supplement A Percentage for October, 1941	Supplement B Percentage for October, 1941
Maine	84.96	93.00
New Hampshire	88.70	93.50
Vermont	93.03	96.00
Massachusetts	90.37	95.00
Rhode Island	90.27	100.50
Connecticut	88.08	94.50
New York	91.42	95.00
New Jersey	86.37	95.50
Pennsylvania	91.19	95.00
Delaware	84.48	93.50
Maryland	85.59	95.00
District of Columbia	88.64	95.00
Virginia	84.42	93.50
West Virginia	91.50	93.00
North Carolina	91.46	92.00
South Carolina	88.44	95.50
Georgia	90.60	93.50
Florida, east of the Apalachicola River	86.12	97.50

The effect of the application of the Supplement A Percentages and Supplement B Percentages is as follows:

1. In the entire Atlantic Coast Area, in each month, the deliveries of motor fuel by Primary Suppliers will be curtailed to approximately 90% of the average for the period May to July, 1941, inclusive. (Supplement A.)
2. Over a complete cycle, if this Order continues for that period, each state included in the Atlantic Coast Area will receive the same proportion of total consumption in the Atlantic Coast Area as it received in a previous normal year, as adjusted for secular and seasonal trends since that date. (Supplement B.)
3. The proportions received by the various states in any month differ to allow for varying seasonal requirements from state to state, from month to month, during a year.
4. The total motor fuel deliverable based upon Supplement B Percentage calculation is estimated, in each state, to equal the total motor fuel deliverable, in each state, based upon Supplement A Percentage calculations. The purpose of the Supplement B Percentages is to account for the varying seasonal requirements of various purchasers and consumers within each state. Variations in percentages from state to state are required to recognize different rates of expansion in requirements among the states since the same month of the preceding year.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Quotations Unchanged But Higher Prices Advocated

In the face of difficulties encountered by prospective purchasers in obtaining supplies, prices of crude and refined oils remained almost wholly unchanged during the past week; although there was continued agitation on the Gulf Coast and in the Mid-Continent for advances in crude price postings.

Acting in behalf of an association of producers, a Houston operator gave out to the press a statement in which he set forth that higher prices for Mid-Continent and Gulf Coast crudes were justified by increased costs of production, the general upward movement of commodity prices, the need for assuring continued operation of stripper wells, and the necessity of encouraging prospecting for new fields.

Meanwhile, independent refiners of the Gulf Coast continued to urge price-control authorities to dispense completely with ceilings on gasoline in that district; and Pennsylvania producers sought to show the government that its order calling for reduction of postings in Pennsylvania grade crude should be rescinded.

Despite the tightness of supplies of all kinds on the East Coast, prices in that district last week were generally unchanged. Shipments against contracts were heavy, and many suppliers were limiting sales to regular customers. Especially scarce was heavy fuel oil, as shipments into the area from the Gulf Coast continued subnormal.

In the Middle West, refiners and marketers maintained prices generally at previous levels, but some difficulty was experienced in meeting market requirements. Both light and heavy fuel oils remained in strong demand, and shipments against contracts were heavy.

In the Mid-Continent, demand for heating oil was reported good, and gasoline was firm, although supplies could be obtained without great difficulty. Lubricants again were actively sought, with demand for both neutrals and bright stocks heavy, while supplies were relatively scarce.

In Western Pennsylvania, there was a continuance of the situation in which supplies of all products and crude oil were light in relation to demand. Gasoline was somewhat more readily available, but kerosene was more difficult to obtain, and some suppliers were asking higher prices for the latter product. Some grades of lubricants also were quoted higher by several refiners, neutrals having continued in exceptionally large demand, although there was some slackening in the demand for bright stocks.

Production and Runs Heavy; East's Heating-Oil Stocks Up

Both crude-oil production and refinery throughput continued close to all-time highs in the week ended September 27, as the industry filled unprecedented demand for its products. Production of gasoline, heating oil, and heavy-fuel oil exceeded current consumption, and the excesses provided welcome additions to storage. On the East Coast, however, there was continued difficulty in filling the record-breaking demand, because of the shortage of transportation.

Inventories of gasoline in the United States were increased 800,000 barrels and then were within a million barrels of the amount held a year previously. Stocks of gas oil and distillate fuel were expanded a little over a million barrels and were 1,600,000 barrels larger than a year earlier. Storage of heavy-fuel oil was increased approximately 250,000 barrels, although stocks remained 13,000,000 barrels smaller than a year before, with California accounting for 11,500,000 barrels of that reduction.

Crude-oil production averaged 4,060,000 barrels daily in the week ended September 27, down only a little from the all-time record of 4,074,200 barrels set in the previous week. The wells turned out 6.8 percent more than the 3,799,950 barrels daily produced in the week of September 27 last year.

Refinery runs eased to 3,980,000 barrels daily from 3,995,000 the week before, but were 10.8 percent in excess of the daily average of 3,592,000 barrels for September of last year. Plants operated at 92.5 percent of rated capacity.

National stocks of gasoline rose during the week to 81,003,000 barrels from 80,199,000 and then compared with 82,146,000 a year before.

The United States total of gas oil and distillate fuel was increased in the September 27 week from 48,907,000 to 49,950,000 barrels, and the latter amount compared with 48,323,000 barrels on hand September 27 last year, a 3.4 percent gain.

Residual fuel oil in storage was increased from 95,005,000 to 95,251,000 barrels during the week, and the latter quantity compared with 107,470,000 barrels for a year previously, a 11.4 percent reduction.

As in other recent weeks, the industry gave special consideration to avoiding scarcity of heating oil on the East Coast, and although it was unable at the same time to maintain normal movement of gasoline and heavy-fuel oil into the district, it built up East Coast stocks of the light-fuel oils somewhat more than in the like week last year. The Eastern inventory of gas oil and distillate fuel was increased 404,000 barrels in the week of September 27, against an increase fo 377,000 barrels in the corresponding week last year. Gasoline stocks were reduced, however, by 522,000 barrels, against a withdrawal of 310,000 barrels in the like week last year. Residual fuel oil stocks were augmented 133,000 barrels, compared with an increase of 431,000 barrels a year ago. In the aggregate, the East Coast

Trends of Operations and Changes in Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1939:						
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,085,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
August 5	[2]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[1]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
October 7	3,435,850	3,505,000	231,564,000	[6]71,152,000	38,549,000	114,397,000
October 21	3,771,550	[2]3,650,000	[3]229,127,000	72,122,000	39,358,000	115,060,000
1940:						
January 27	3,611,600	3,470,000	237,339,000	87,914,000	27,407,000	103,015,000
February 24	3,732,100	3,490,000	240,836,000	96,719,000	25,390,000	103,419,000
March 30	3,841,250	3,585,000	250,561,000	101,370,000	23,778,000	105,081,000
April 20	3,858,550	3,535,000	254,881,000	[1]102,817,000	24,779,000	103,323,000
April 27	3,845,250	3,555,000	256,670,000	102,452,000	24,997,000	102,552,000
May 25	3,835,650	3,580,000	259,330,000	100,297,000	28,356,000	104,015,000
June 22	3,846,450	[2]3,690,000	260,891,000	97,276,000	32,751,000	104,683,000
June 29	3,639,550	3,625,000	262,059,000	95,142,000	33,590,000	104,486,000
July 27	3,690,400	3,555,000	262,579,000	90,173,000	38,981,000	105,924,000
August 31	3,501,350	3,575,000	265,865,000	85,393,000	44,766,000	108,774,000
September 28	3,799,950	3,600,000	263,609,000	82,273,000	47,986,000	108,450,000
October 26	3,640,300	3,565,000	262,746,000	80,891,000	[4]48,893,000	108,475,000
November 9	3,584,200	3,510,000	261,631,000	[6]79,847,000	48,408,000	107,687,000
November 30	3,335,050	3,510,000	262,679,000	80,284,000	46,212,000	106,618,000
December 28	3,385,500	3,585,000	261,552,000	83,274,000	42,266,000	102,620,000
1941:						
January 25	3,599,100	3,625,000	260,093,000	88,762,000	39,039,000	100,297,000
February 22	3,629,650	3,590,000	261,783,000	95,812,000	34,381,000	98,631,0000
March 29	3,746,550	3,625,000	266,187,000	[2]99,727,000	29,949,000	96,152,000
April 26	3,726,850	3,675,000	266,149,000	96,647,000	29,543,000	94,732,000
May 31	3,786,100	3,699,000	262,356,000	93,845,000	33,524,000	92,757,000
June 28	3,847,250	3,930,000	259,399,000	91,461,000	35,732,000	92,896,000
July 12	3,870,750	[4]4,090,000	255,567,000	89,561,000	37,812,000	92,699,000
August 2	3,695,250	3,845,000	252,535,000	86,779,000	41,433,000	94,800,000
August 30	4,004,700	4,070,000	249,413,000	81,672,000	45,351,000	95,052,000
Sept. 6	3,814,950	3,995,000	247,528,000	81,571,000	46,127,000	95,125,000
Sept. 13	4,033,700	4,010,000	246,164,000	80,555,000	47,271,000	95,753,000
Sept. 20	[1]4,074,200	3,995,000	246,500,000	80,199,000	48,907,000	95,005,000
Sept. 27, 1941	4,060,000	3,980,000	.....	81,003,000	49,950,000	95,251,000
Sept. 27, 1940	3,799,950	[5]3,592,000	[4]262,209,000	82,146,000	48,323,000	107,470,000
Change in past year.	+6.8%	+10.8%	—5.9%	—1.4%	+3.4%	—11.4%

[1] All time peak. [2] Peak for year. [3] Lowest since April, 1922. [4] Stocks Sept. 21, 1940
[5] Lowest since October, 1922, due to shut down of six Mid-Continent states. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] September, 1940, daily average.

stocks of gasoline, light fuel oil, and heavy fuel oil were increased only 15,000 barrels during the week, against an increase of 498,000 barrels last year. This indicated a lagging of 70,000 barrels daily in the replenishment of Eastern supplies, although as just indicated, the deficiency was not in the movement of heating oil, the product now most urgently needed.

On September 27, the East Coast stocks of light-fuel oils totaled 18,364,000 barrels, somewhat more than the 18,156,000 barrels held a year previously. In the third quarter of this year, July-August-September, the East Coast inventory was increased 8,943,000 barrels, against a build-up of only 7,755,000 barrels in the like period last year. In the important Middle Western consuming region, present stocks are the same as those held a year ago, and in California they are 2,500,000 barrels larger, while in the Mid-Continent, stocks are up 500,000 barrels. On the Gulf Coast supplies are down about a million barrels.

Gasoline stocks on the East Coast totaled 18,872,000 barrels September 27, compared with 20,804,000 barrels a year previously, but in the Appalachian district no change was shown, while the Middle West showed an 800,000-barrel increase. In the Mid-Continent and on the Gulf Coast, too, gasoline storage is substantially larger than a year ago. In California, there has been a reduction of nearly 2,000,000 barrels.

Stocks of heavy fuel oil on the East Coast amounted to 10,155,000 barrels September 27, against 12,812,000 a year

Wholesale Prices of Refined Products in Principal Markets

REFINED GASOLINE	Range Last Week (Cents a gal.)		Changes from Week Before	
Oklahoma Refineries:				
60 Octane and Under	5¼	5⅝	...	...
63-66 Octane	5⅝	6	...	...
72-74 Octane	6	6⅜	...	...
80-82 Octane, Ethyl	6⅜	7¼	...	...
Mid-Western Tank Car:				
60 Octane and Under	5⅛	5⅝	...	...
63-66 Octane	5⅝	6	...	...
72-74 Octane	6	6⅜	...	...
80-82 Octane, Ethyl	7⅜	7⅝	...	...
New York Harbor:				
68-70 Octane	8	8	...	...
72-74 Octane	8	8½	...	...
Min. 80 Octane, '39 Research	8½	9	...	...
Gulf Coast:				
60 Octane unleaded	5½	5¾	...	...
65 Octane unleaded	5¾	6	...	...
68 Octane unleaded	6¼	6⅜	...	—⅛
70 Octane unleaded	6¼	6⅝	...	...
72-74 Octane leaded	6¼	6⅝	...	...
Min. 80 Octane, '39 Research	6½	6¾	...	...
NATURAL GASOLINE				
Grade 26-70:				
F.O.B. Group 3	4⅝	4¾	...	...
F.O.B. Br'kenr'ge, Tex.	4⅜	4⅝	...	...
KEROSENE				
Oklahoma Refineries:				
41-43 water white	4⅜	4¾	...	...
42-44 water white	4½	4⅞	...	...
Mid-Western Tank Car:				
41-43 water white	4⅜	4¾	...	...
42-44 water white	4½	4⅞	...	...
New York Harbor	5⅜	5¾	...	...
RANGE OIL				
At Oklahoma Refineries	4	4⅜	...	...
In Mid-Western Market Group 3, basis	4	4¼	...	...
LIGHT FUEL OILS				
Oklahoma Refineries:				
No. 1 straw	3½	4¼	...	...
No. 3	3⅝	3⅞	...	...
Mid-Western Tank Car:				
No. 1 white	3⅞	4⅛	...	...
No. 3	3⅜	3½	...	...
New York Harbor:				
No. 1	5⅜	5¾	...	...
No. 3	5¼	5¼	...	...

HEAVY FUELS	Range Last Week (Per Bbl.)		Changes from Week Before	
Oklahoma Refineries:				
No. 6	$0.80	$0.90	...	...
Mid-Western Tank Car:				
No. 5	.85	.85	...	...
No. 6	.85	.87½	...	...
New York Harbor:				
No. 5	1.65	1.75	...	...
No. 6	1.35	1.50	...	...
BUNKER C FUEL OIL (Per barrel, ships' bunkers)				
Gulf Coast	$0.85	$ .95	...	...
New York Harbor	1.35	1.50	...	...
DIESEL OIL (Per barrel, ships' bunkers)				
Gulf Coast	$1.55	$1.55	...	...
New York Harbor	2.15	2.15	...	...
LUBRICATING OIL (Cents a gal.)				
Oklahoma Refineries:				
Bright Stock, 150-160 viscosity at 210° 10-25 pour test	22½	23	...	...
Neutral oil pale No. 3 Color, 150 viscosity at 100°, 0-10 pour test	14½	14½	...	...
Western Pennsylvania:				
Bright Stock, 145-155 viscosity at 210°, 25 pour test	25	28	...	...
Neutral Oil No. 3 Color, 150 viscosity at 70°, 25 pour test	31	31	...	...

United States Crude Oil Production Temporarily Down

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (October)	Allowable (Barrels Daily in October)	BARRELS DAILY FOR WEEK ENDED Sept. 27	Oct. 4
TEXAS:				
Texas Panhandle	.....	.....	80,400	72,200
North Texas	.....	.....	104,100	100,800
West Central Texas	.....	.....	31,200	30,500
West Texas	.....	.....	279,500	232,100
East Central Texas	.....	.....	84,700	80,000
East Texas Field	.....	.....	370,300	298,500
South Texas	.....	.....	217,600	180,300
Texas Gulf Coast	.....	.....	292,500	249,500
Total Texas	1,420,100	1,433,957‡	1,460,300	1,243,900
CALIFORNIA:				
Long Beach	.....	.....	38,400	38,400
Midway-Sunset	.....	.....	43,600	41,500
Kettleman Hills	.....	.....	37,900	36,400
Wilmington	.....	.....	85,400	86,500
Others	.....	.....	426,900	430,900
Total California	613,200	613,200*	632,200	633,700
OKLAHOMA:				
Oklahoma City	.....	.....	82,500	93,050
Seminole Area	.....	.....	110,900	109,850
Others	.....	.....	231,150	229,600
Total Oklahoma	481,500	428,000	424,550	432,500
ILLINOIS:				
Salem	.....	.....	81,300	78,700
Louden	.....	.....	61,750	59,600
Centralia	.....	.....	9,200	9,050
Other New Pools	.....	.....	251,050	273,450
Old Pools	.....	.....	11,400	12,850
Total Illinois	399,200	.....	414,700	433,650

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (October)	Allowable (Barrels Daily in October)	BARRELS DAILY FOR WEEK ENDED Sept. 27	Oct. 4
LOUISIANA:				
North Louisiana	.....	.....	79,300	78,800
South Louisiana	.....	.....	254,800	252,800
Total Louisiana	332,000	339,233	334,100	331,600
KANSAS	253,000	253,000	258,000	239,700
NEW MEXICO	114,600	114,600	115,200	115,500
EASTERN STATES:				
Pennsylvania Grade	73,800	.....	74,700	74,950
Others, Eastern	24,300	.....	18,500	18,500
Total Eastern States	98,100	.....	93,200	93,450
MOUNTAIN STATES:				
Wyoming	84,300	.....	86,700	87,700
Montana	20,300	.....	20,500	20,450
Colorado	5,000	.....	4,800	4,900
Total Mountain States	109,600	.....	112,000	113,050
MICHIGAN	44,100	50,000†	51,300	52,400
INDIANA	20,100	.....	20,250	19,800
ARKANSAS	78,200	73,415	75,700	75,550
MISSISSIPPI	43,900	.....	54,800	59,850
NEBRASKA	4,300	.....	6,900	7,000
§Total 8 Prorated States	3,336,700	3,305,495	3,351,350	3,124,850
Total United States	4,012,900	.....	4,053,200	3,851,650

* Recommendation of Conservation Committee of California Oil Producers.
† Estimate of actual production under prescribed regulations, which do not fix a definite state total allowable.
§ Texas, California, Oklahoma, Louisiana, Kansas, New Mexico, Arkansas, Michigan.
‡ Calculated daily average of actual production at beginning of month, allowing for usual under production of 3½ percent below net allowable, which was figured at 1,485,966 barrels daily. However, allowable normally increases as new wells are completed, and actual daily average production for month is expected to conform with Bureau of Mines estimate of demand. Under October order, most Texas fields were ordered shut down October 4, 5, 11, 12, 18, 19, 25, 26 and 31. Panhandle was ordered shut down October 5, 12, 19 and 26.

previously, and Appalachian stocks were down to 523,000 from 587,000. In the Middle West, storage was up over a million barrels at 4,504,000. The Mid-Continent showed a decrease of about a half-million barrels. But Gulf Coast stocks were up a million. California's inventory has shown the greatest change in the past year, a reduction of nearly 11,500,000 barrels, from 75,319,000 to 63,975,000 barrels.

Having processed 616,000 barrels of crude daily in the week ended September 27, East Coast refineries were operating at 91.5 percent of capacity, after having averaged only 605,000 barrels daily (89.9 percent of capacity) the week before. Appalachian plants operated at 97.1 percent of rated capacity, Midwestern refineries at 103 percent, and Oklahoma-Kansas-Missouri at 94.6 percent. North Louisiana-Arkansas and South Louisiana again showed actual capacity greater than that with which they were credited, having operated at 123.4 and 117.6 percent, respectively. Coastal Texas plants operated at 92.3 percent, and Inland Texas at 88.6. Rocky Mountain plants operated at 95.6 percent of rated capacity and California refineries at 75.7 percent.

Mid-Continent Producers Seek Crude Oil Price Increase

Mid-Continent and Gulf Coast producers have started a drive to increase crude oil prices. Purchasing companies have made no comments, apparently waiting for a statement of attitude by Washington officials.

Walter L. Goldston, Houston producer and member of the executive committee of the Independent Petroleum Association, issued a letter last week, typical of statements being issued by producers, setting forth why an increase is justified.

"With the exception of Gulf Coast crudes, present prices of crude in this area are less than they were in 1937," he said. "In 1937 in Oklahoma or Kansas, 36-gravity oil was selling for $1.22 per barrel. The present price for this same oil is $1.17 per barrel.

"Prices of crude oil have not increased with prices of other commodities. The price level for products of most industries, exclusive of farm and food prices, is above the level for 1935-'36-'37. Petroleum prices, however, are 11-3/10 percent below that level.

"We do not believe prices of crude oil should be dependent on price of gasoline. Instead, we think the reverse should be true. The price of gasoline should be based on the price of crude oil.

"Present crude prices are below actual cost of stripper production. According to a recent survey, there were 390,000 producing wells in the United States January 1, 1941. Only 12 percent of the wells were flowing. Another survey shows that the average cost of settled production is $1.50 per barrel. In order to prevent the abandonment of these wells, the average price should be in excess of $1.50 per barrel."

Production Reflects Texas Shutdowns; Illinois Climbs

United States crude oil production sharply decreased during the past week, ended October 4, as Texas for the week had its fields closed in three days, against the normal two; the national output having averaged 3,851,650 barrels daily, down 201,550 from the previous week's rate and 161,250 under the daily average market demand for domestic crude in October, as estimated by the Bureau of Mines.

Texas was down 216,400 barrels in averaging 1,243,900 a day, and temporarily was materially below market demand.

Noteworthy was the further sharp

Eastern States Crude Oil Prices

FIELD—	Flat Price	Date Posted
Bradford-Allegany	$2.75	8-25-41
Sw. Pa. Pipe Line	2.40	8-25-41
Eureka Pipe Line, W. Va.	2.34	8-25-41
Corning Grade, Ohio	1.31	5-27-41
Buckeye Crude, Ohio	2.30	6-18-41

Major Crude Oil Price Changes

	Penna. Grade	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
Jan. 9, 1936	.....	Up 10	.....
Jan. 13, 1936	Up 15	.....	.....
Mar. 7, 1936	.....	.....	Up *18
Dec. 28, 1936	Up 12	.....	.....
Jan. 28, 1937	.....	Up 12	.....
Feb. 24, 1937	Up 10	.....	.....
June 7, 1937	Up 15	.....	.....
Sept. 1, 1937	Cut 22	.....	.....
Oct. 12, 1937	Cut 25	.....	.....
Dec. 1, 1937	Cut 15	.....	.....
Mar. 7, 1938	Cut 17	.....	.....
June 13, 1938	Cut 25	.....	.....
Sept. 1, 1938	Cut 12	.....	.....
Oct. 11, 1938	.....	Cut 20	.....
Jan. 21, 1939	Up 12	.....	.....
Feb. 2, 1939	Up 8	.....	.....
Mar. 6, 1939	Up 12	.....	.....
Oct. 6, 1939	Up 25	.....	.....
Nov. 1, 1939	Up 15	.....	.....
Dec. 1, 1939	Up 10	.....	.....
Jan. 1, 1940	Up 25	.....	.....
Feb. 1, 1940	.....	.....	Cut *7
May 22, 1940	Cut 25	.....	.....
June 18, 1940	Cut 25	.....	.....
July 12, 1940	Cut 25	.....	.....
Aug. 28, 1940	Cut 15	.....	.....
Nov. 12, 1940	Up 15	.....	.....
Dec. 17, 1940	Up 15	.....	.....
Jan. 27, 1941	Up 15	.....	.....
April 1, 1941	.....	Up 5	.....
April 23, 1941	Up 10	.....	.....
April 24, 1941	.....	.....	Up *6
May 19, 1941	.....	Up 10	.....
May 21, 1941	Up 15	.....	.....
May 22, 1941	.....	.....	Up *6
June 18, 1941	Up 20	.....	.....
Aug. 14, 1941	Up 23	.....	.....
Aug. 25, 1941	Cut 23	.....	.....

* Signal Hill 26 gravity.

CRUDE OIL PRICES IN CALIFORNIA

Prices per barrel in field, posted by Standard Oil Company of California, effective May 23, 1941
All gravities above those quoted take highest price offered in that field

Gravity	Signal Hill (Long Beach)	Wilmington	El Segundo	Seal Beach	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canon	Athens-Rosecrans	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Newhall, Kern River, Kern Front, McKittrick, Round Mountain	Greeley, Canal, Wasco	Coles Levee	Mountain View	Elk Hills, Buena Vista Hills, Midway-Sunset, Lakeview Area	Lost Hills	Coalinga	Kettleman Hills	Elwood Terrace
14-14.9	....	$0.68	....	....	$0.71	....	....	$0.70	....	$0.70	$0.70	$0.70	$0.72	....	....	$0.73	....	....	....	$0.73	$0.73	$0.73	....	....
15-15.9	....	.71	....	....	.75	$0.76	....	.72	....	.72	.71	.72	.72	....	....		....	....	....	.73	.73	.73	....	....
16-16.9	....	.74	$0.79	....	.79	.79	....	.75	....	.74	.73	.75	.72	....	....		....	....	....	.73	.75	.73	....	....
17-17.9	....	.78	.82	....	.82	.82	....	.78	....	.77	.76	.78	.72	....	....		....	....	....	.75	.78	.73	....	....
18-18.9	$0.80	.82	.86	....	.86	.85	....	.81	....	.80	.79	.82	.74	....	....		....	....	....	.78	.81	.73	....	....
19-19.9	.84	.86	.90	....	.89	.88	....	.85	....	.83	.82	.85	.77	....	....	Wheeler Ridge	....	....	$0.73	.81	.84	.75	....	....
20-20.9	.88	.90	.94	....	.93	.92	$0.80	.88	....	.86	.85	.89	.80	....	....		....	....	.76	.85	.87	.77	....	....
21-21.9	.92	.94	.98	....	.96	.95	.84	.91	....	.89	.89	.92	.84	....	....		....	....	.79	.90	.90	.80	....	....
22-22.9	.96	.98	1.02	$0.88	.99	.98	.87	.95	....	.93	.93	.96	.87	....	....	$0.76	....	....	.83	.94	.93	.83	....	....
23-23.9	1.00	1.02	1.05	.92	1.02	1.01	....	.98	....	.97	.98	1.00	.91	....	....	.80	....	....	.87	.99	.96	.86	....	....
24-24.9	1.03	1.06	1.07	.97	1.05	1.04	F.O.B.	1.01	....	1.01	1.02	1.03	.94	$0.99	....	.83	....	....	.90	1.03	.99	.89	....	....
25-25.9	1.07	1.09	1.10	1.01	1.08	1.07	Our	1.04	....	1.05	1.06	1.07	.98	1.02	....		....	....	.94	1.07	1.01	.92	....	....
26-26.9	1.11	1.12	1.12	1.06	1.11	1.10	Pipe	1.08	....	1.09	1.10	1.11	1.01	1.06	....	....	....	....	.97	1.11	1.04	.95	....	....
27-27.9	1.15	1.15	1.15	1.10	1.14	1.14	Line	1.11	....	1.13	.....	1.15	1.05	1.10	$1.04	....	....	....	1.01	1.15	1.07	.98	....	....
28-28.9	1.18	1.18	1.17	1.15	1.17	1.17	....	1.14	....	1.17	....	....	1.08	1.13	1.08	....	....	....	1.04	1.19	1.10	1.00	....	....
29-29.9	1.20	1.21	....	1.19	1.20	1.20	....	....	$1.17	....	....	....	1.12	1.17	1.12	....	....	....	1.07	1.24	1.13	1.02	....	....
30-30.9	1.23	1.24	....	....	1.23	1.22	....	....	1.21	....	....	....	1.15	1.21	1.15	....	$1.01	$1.09	1.10	1.28	1.16	1.04	....	F.O.B
31-31.9	....	....	....	....	....	1.24	....	....	1.25	....	....	....	1.19	1.24	1.19	....	1.04	1.12	1.14	....	....	1.06	....	Ship
32-32.9	....	....	....	....	....	....	....	....	1.29	....	....	....	1.23	1.28	1.23	....	1.07	1.14	1.17	....	....	1.09	....	....
33-33.9	....	....	....	....	....	....	....	....	1.32	....	....	....	1.27	....	1.26	....	1.10	1.17	....	....	....	1.11	....	$1.22
34-34.9	....	....	....	....	....	....	....	....	1.36	....	....	....	1.31	....	1.30	....	1.13	1.20	....	....	....	1.13	....	1.25
35-35.9	....	....	....	....	....	....	....	....	....	....	....	....	1.35	....	....	....	1.16	1.22	....	....	....	....	$1.23	1.28
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	1.39	....	....	....	1.19	1.25	....	....	....	....	1.26	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	....	1.43	....	....	....	1.22	....	....	....	....	....	1.29	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	....	1.47	....	....	....	1.25	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....	....	....	....	....	1.51	....	....	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	....	....	....	....	....	....	....	....	....	1.53	....	....	....	....	....	....	....	....	....	....	....

GRAVITY-SCALE CRUDE OIL PRICES IN MID-CONTINENT FIELDS

Posted in most instances between May 19 and May 21, 1941

GRAVITY	Oklahoma-Kansas		North Louisiana-Arkansas					Inland Texas and New Mexico			South Texas		Texas Gulf Coast			Louisiana Gulf Coast						
	Stanolind, Gulf, Texas, Skelly, Barnsdall, Tidewater, Sinclair, Phillips	Carter, Magnolia, Shell	[1]Rodessa, etc.	[2]Champagnolle, etc	Bunkie, Eola, Olla, (by Standard)	Lisbon, La. (by Gulf)	[3]Atlanta, Buckner, etc., Ark.	North and West Central Texas	[4]Eastern Texas	West Texas, [17]Panhandle, New Mexico	[5]Refugio Type	[6]Mirando Type	[7]Gulf Coast	[8]Anahuac Type	[9]Dickinson Type	[10]Gulf Coast	[11]Standard of La.	[12]Texas Co.	[13]Texas Co.	[14]Magnolia Pet. Co.	[15]Shell Oil Co.	Jennings (by Gulf)	[16]Rocky Mt. Area (Salt Creek, etc.)
17-17.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	$0.94	....	....	....
18-18.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.96	....	....	....
19-19.9	....	....	....	....	....	....	....	....	$0.80	$0.70	$1.08	$1.03	$1.06	$0.98	$0.93	$1.06	....	....	....	.98	$0.99	....	....
20-20.9	$0.85	$0.75	....	....	....	....	$0.68	$0.78	.82	.72	1.10	1.05	1.08	1.00	.95	1.08	$0.90	....	....	1.00	1.01	....	....
21-21.9	.87	.78	....	....	....	....	.70	.80	.84	.74	1.12	1.07	1.10	1.02	.97	1.10	.92	....	....	1.02	1.03	....	....
22-22.9	.89	.81	....	....	....	....	.72	.82	.86	.76	1.14	1.09	1.12	1.04	.99	1.12	.94	....	....	1.05	1.05	....	....
23-23.9	.91	.84	....	....	....	....	.74	.84	.88	.78	1.16	1.11	1.14	1.06	1.01	1.14	.96	....	....	1.08	1.07	....	....
24-24.9	.93	.87	$0.88	$0.86	$0.98	....	.76	.86	.90	.80	1.18	1.13	1.16	1.08	1.03	1.16	.98	....	....	1.11	1.09	....	....
25-25.9	.95	.90	.90	.88	1.00	....	.78	.88	.92														
									.97	.82	1.20	1.15	1.18	1.10	1.05	1.18	1.00	....	....	1.14	1.11	....	....
26-26.9	.97	.93	.92	.90	1.02	....	.80	.90	.99	.84	1.22	1.17	1.20	1.12	1.07	1.20	1.02	....	....	1.17	1.13	....	....
27-27.9	.99	.96	.94	.92	1.04	$0.81	.82	.92	1.01	.86	1.24	1.19	1.22	1.14	1.09	1.22	1.04	....	....	1.19	1.15	....	....
28-28.9	1.01	.99	.96	.94	1.06	.83	.84	.94	1.03	.88	1.26	1.21	1.24	1.16	1.11	1.24	1.06	$1.06	....	1.21	1.17	....	$0.96
29-29.9	1.03	1.02	.98	.96	1.08	.85	.86	.96	1.05	.90	1.28	1.23	1.26	1.18	1.13	1.26	1.08	1.08	....	1.23	1.19	....	.98
30-30.9	1.05	1.05	1.00	.98	1.10	.87	.88	.98	1.07	.92	1.30	1.25	1.28	1.20	1.15	1.28	1.10	1.10	$1.05	1.25	1.21	....	1.00
31-31.9	1.07	1.07	1.02	1.00	1.12	.89	.90	1.00	1.09	.94	1.32	1.27	1.30	1.22	1.17	1.30	1.12	1.12	1.07	1.27	1.23	$1.07	1.02
32-32.9	1.09	1.09	1.04	1.02	1.14	.91	.92	1.02	1.11	.96	1.34	1.29	1.32	1.24	1.19	1.32	1.14	1.14	1.09	1.29	1.25	1.09	1.04
33-33.9	1.11	1.11	1.06	1.04	1.16	.93	.94	1.04	1.13	.98	1.36	1.31	1.34	1.26	1.21	1.34	1.16	1.16	1.11	1.31	1.27	1.11	1.06
34-34.9	1.13	1.13	1.08	1.06	1.18	.95	.96	1.06	1.15	1.00	1.38	1.33	1.36	1.28	1.23	1.36	1.18	1.18	1.13	1.33	1.29	1.13	1.08
35-35.9	1.15	1.15	1.10	1.08	1.20	.97	.98	1.08	1.17	1.02	1.40	1.35	1.38	1.30	1.25	1.38	1.20	1.20	1.15	....	....	1.15	1.10
36-36.9	1.17	1.17	1.12	1.10	1.22	....	1.00	1.10	1.19	1.04	1.42	1.37	1.40	1.32	1.27	1.40	1.22	1.22	1.17	....	....	1.17	1.12
37-37.9	1.19	1.19	1.14	1.12	1.24	....	1.02	1.12	1.21	1.06	1.44	1.39	1.42	1.34	1.29	1.42	1.24	....	1.19	....	....	1.19	1.14
38-38.9	1.21	1.21	1.16	1.14	1.26	....	1.04	1.14	1.23	1.08	1.46	1.41	1.44	1.36	1.31	1.44	1.26	....	1.21	....	....	1.21	1.16
39-39.9	1.23	1.23	1.18	1.16	1.28	....	1.06	1.16	1.25	1.10	1.48	1.43	1.46	1.38	1.33	1.46	1.28	....	1.23	....	....	1.23	1.18
40 & Up	1.25	1.25	1.20	1.18	1.30	....	1.08	1.18	1.27	1.12	1.50	1.45	1.48	1.40	1.35	1.48	1.30	....	1.25	....	....	1.25	1.20

[1] Gulf schedule for Caddo, Homer, Haynesville, Bull Bayou, Crichton, De Soto, El Dorado and Rodessa, Texas. Standard of La. schedule for Cotton Valley, Rodessa, Shreveport (Cross Lake). Magnolia schedule for Haynesville, Cotton Valley, Rodessa, and Miller Co., Ark. Texas Co. schedule for "North Louisiana."

[2] Schedule of Standard of La. for Caddo, De Soto, Sabine, Fouke, Homer, Miller Co., Sugar Creek. Schedule of Root Petroleum Co. for Nick Springs, Urbana light, Schuler sweet, Rainbow, South Field (El Dorado), and Champagnolle.

[3] Schedule of Standard of La. for Atlanta, Buckner, Magnolia, Schuler: Jones sand, Village. Schedule of Root Petroleum Co. for Schuler: Reynolds lime, and Schuler: Jones sand.

[4] Humble schedule for Anderson, Cherokee, Limestone, and Navarro counties and Navarro Crossing field, except that prices from 80 to 92 cents represent postings only for Hawkins field, Wood County. Rodessa, Texas, prices are same as in Rodessa, La.-Ark.

[5] Schedule for Refugio, E. White Point, Greta, Melon Creek, Midway, Minnie Bock, O'Connor-McFaddin, Plymouth, Saxet, Taft, and Tom O'Connor.

[6] Schedule for Blanchard, Bridwell, Colorado, Comitas, Eagle Hill, Escobas, Fitzsimmons, Glen, Government Wells (N. and S.), Heyser, Hoffman, Kelsey, Kohler, Loma Novia, Lundell, Manila, Mirando Valley, Placedo, Randado, Sarnosa, and Tesoro.

[7] Humble schedule for Amelia, Clear Lake, Goose Creek, Hastings, Magnet, Mykawa, Mykawa new, Raccoon Bend, South Thompsons, Sugarland, Thompsons, Webster. Texas Co. schedule for Arriola, Ganado, Hamman, Hillje, Humble, Kubela, Magnet, Manvel, Markham, Maurita, Old Ocean, Pickett Ridge, Port Neches, Sour Lake, West Columbia, Withers. Pan American Prod. Co. schedule for Hastings and South Houston. Gulf schedule for Spindle Top, Sour Lake, Lovells Lake, West Beaumont, Goose Creek, South Liberty, Big Creek, Blue Ridge, Fannett, Moore, Barbers Hill, Hankamer, Thompsons, Lochridge, Dyersdale, and Hull (old) crudes. Sun schedule for Barbers Hill, Batson old, Cotton Lake, Esperson below 35 gravity, Goose Creek, Greens Lake, Hull below 25, Humble below 35, Nome, North Dayton below 25, Orange, Saratoga, Sour Lake, South Liberty.

[8] Humble schedule for Anahuac, Angleton, Cedar Point, Fishers' Reef, Hull old and new, Pierce Junction, Red Fish Reef, Turtle Bay fields. Sun schedule for Anahuac, Caplen, and Turtle Bay. Gulf schedule for Anahuac, Hull new, Pierce Junction, Orange and Thompsons deep.

[9] Humble schedule for Dickinson, Gillock, Hardin, League City, and Rowan fields. Pan American Prod. Co. schedule for Gillock crude.

[10] Sun Oil Co. schedule for Bayou Blue, Chacahoula, Fausse Pointe, Hackberry (E. and W.), and Vinton. Texas Co. schedule for Bay St. Elaine, Caillou Island, Iberia, Lake Barrek, Lake Pelto, Leesville and Port Barre for crude ranging in gravity up to 27-27.9; for lighter oils in those fields see Footnote 12. Gulf schedule for Edgerly, Starks, Vinton, E. Hackberry Cameron Meadows, Leesville. Deduct 10 cents for Gulf's prices for Timbalier Bay, Grand Bay, Quarantine Bay, and West Bay. Deduct 2 cents for Standard of La. prices for University (Baton Rouge) crude of 30 to 35.9 gravity.

[11] Standard of La. schedule for Bayou Mallet, Choctaw, Darrow, Jeanerette, Lirette, N. Crowley, S. Crowley, Port Barre, Potash, Roanoke, St. Martinville. Deduct 10 cents for Anse La Butte.

[12] Texas Co. schedule for Bateman Lake, Dog Lake, Fausse Point, Horseshoe Bayou, Jefferson Island, Plumb Bob, Vermillion Bay, West Cote Blanche, and Delta Duck Club. Add 8 cents to these prices for Texas Co. postings for 28 or higher gravity at Bay St. Elaine, Caillou Island, Iberia, Lake Pelto, Leesville, Port Barre, and Lake Barre.

[13] Texas Co. schedule for Delta Farms, Golden Meadows, Lake Salvador.

[14] Magnolia schedule for Lockport, Cameron Meadows, West Gueydan.

[15] Shell Oil Co. schedule at Iowa, Black Bayou, White Castle. For Shell's prices at Roanoke and Chalkley fields deduct 5 cents. For Shell's prices at Gibson, South Houma, Hester, and West Lake Verret fields deduct 10 cents.

[16] Sinclair-Wyoming Oil Co. prices at Salt Creek, Lost Soldier, Iron Creek, effective May 20, 1941. Deduct 10 cents for East Mahoney and deduct 20 cents for Mahoney and Wertz.

[17] Add 3 cents for Panhandle prices.

Mid-Continent Flat Prices

FIELD—	Flat Price	Date Posted
Arkansas:		
Big Creek, Dorcheat, McKamie	$1.15	5-22-41
Smackover, Heavy	.83	5-22-41
Louisiana, North:		
Cotton Valley Distillate	1.30	5-22-41
Cotton Valley (Holloway Sand)	1.25	5-22-41
Lisbon Distillate	1.20	5-22-41
Louisiana, South:		
Erath	1.21	5-21-41
Garden Island	1.36	5-21-41
Happytown	1.15	5-20-41
Lafitte, Paradis	1.19	5-21-41
Lake Arthur & Tepetate	1.18	5-21-41
Lake Mongoulois	1.36	5-21-41
Ville Platte	1.20	5-21-41
Texas:		
Alice, Benavides (No. Sweden) Ben Bolt, Clark-Muil, Sun and Tom Graham	1.35	5-21-41
Cayuga	.90	5-21-41
Clay Creek	1.00	5-22-41
Cleveland	1.26	5-21-41
Conroe	1.43	5-21-41
Darst Creek	1.14	5-21-41
Esperson 35 gravity and above and S. Esperson (Sun Oil Co.)	1.30	5-22-41
East Texas, Flag Lake	1.25	5-20-41
Flour Bluff, East Flour Bluff, and La Rosa	1.33	5-21-41
Hockley-Cochran Counties	.87	5-21-41
Livingston, Cleveland	1.25	5-20-41
Long Lake	1.23	5-21-41
Luling	1.05	5-21-41
Lytton Springs	1.17	5-21-41
North Rincon	1.35	5-22-41
Salt Flat, North Salt Flat, Darst Creek, Hilbig, Carroll, Clark, Zoboroski	1.14	5-21-41
Satsuma, Tomball	1.40	5-21-41
Sun Oil Co. at Batson (new), Fig Ridge, Hardin, Hull 25 and above, Humble 35 and above, LaBelle, North Dayton 25 and above, Oyster Bayou, Seabreeze, South China, West Orange, and Willow Slough	1.25	5-22-41
South Cotton Lake	1.35	5-22-41
Sun	1.35	5-22-41
Talco	.79	5-21-41
Van	1.08	5-21-41
Yates (Deep)	.95	5-20-41
Yates (Shallow)	.82	5-20-41

Michigan Prices

Central (Basin):		
Porter, Greendale, Crystal, Wise, Midland, Vernon, Saginaw	$1.44	5-27-41
Buckeye, Edenville, Bentley, Beaverton, Monitor, Kawkawlin	1.42	5-27-41
Freeman, Lincoln, Sherman Redding, Temple, Winterfield	1.39	5-27-41
Hamilton-Grout	1.29	5-27-41
Adams	1.27	6- 1-41
Arenac, Clayton, Ogemaw, W. Branch	1.24	5-27-41
Southwest (Shallow):		
Traverse crude in Allegan, Kent, Ottawa, Van Buren Cos	1.45	6- 2-41
Clare	1.11	5-27-41

Middle West Prices

FIELD—	Flat Price	Date Posted
Lima, Ohio	$1.17	5-28-41
Illinois Basin (Sohio Corp.)	1.37	5-19-41
Lake Centralia-Salem, Illinois	1.37	5-19-41
Eastern Ill.-Western Ind	1.22	5-21-41
Western Kentucky	1.32	5-21-41
Birk City, Western Kentucky	1.32	5-21-41
Kentucky River, Eastern Ky	1.43	6-19-41
Big Sandy River, Eastern Ky	1.38	6-19-41

Rocky Mountain States Prices

Colorado:		
Canon City and Florence	$0.95	4- 1-41
Iles	.97	4- 1-41
Montana:		
Cat Creek	1.15	4- 1-41
Cut Bank	1.00	1- 1-40
Dry Creek	1.02	5-20-41
Sunburst	1.00	5-20-41
New Mexico:		
Artesia	.94	5-21-41
Hogback	1.00	10-11-38
Wyoming:		
Big Muddy	1.03	4- 1-41
Byron	.55	10-11-38
Elk Basin	1.00	5-21-41
Frannie, Light	.70	5-20-41
Frannie, Heavy	.47	5-20-41
Garland	.50	10-11-38
Grass Creek, Light	1.00	5- 1-41
Grass Creek, Heavy	.50	5-20-41
Hamilton Dome	.45	5-20-41
Lance Creek (Ohio Oil Co)	1.12	7- 1-41
Mill Creek	.72	10-11-38
Oregon Basin	.40	4-20-40
Osage	1.30	10-11-38
Poison Spider	.59	10-11-38
Rock River	1.15	5-21-41
Tensleep	.6515	2- 1-41

increase in Illinois production, as fields of that state were called upon to supply more crude for movement by railway tank car to the East Coast, in consequence of the tanker shortage. Illinois output jumped almost 20,000 barrels, to 433,650 daily in the week ended October 4 from 414,700 the previous week. Last May, the state was producing only 325,000 barrels daily.

Oklahoma production increased 8000 barrels to 432,500 daily, but still was 50,000 under demand. Kansas temporarily dropped 20,000 barrels to 239,700 daily, and Louisiana was off 2500 barrels to 331,600. New Mexico and California were virtually unchanged.

Daily Output of Natural Gasoline Declined in July

Daily average production of natural gasoline dropped to 7,116,000 gallons in July from 7,133,000 gallons in June, but total output, because of the longer month, was greater—220,584,000 gallons against 213,990,000 gallons, it is shown by the monthly report of the Bureau of Mines.

The decline in daily average, the bureau said, was due principally to decreases in the Panhandle, East Texas and Seminole districts which failed to offset increases in the Texas Gulf, Louisiana and Kettleman Hills districts.

Stocks of natural gasoline increased 3,444,000 gallons during the month, those at plants and terminals decreasing from 158,886,000 to 153,678,000 gallons while those at refineries increased from 102,984,000 to 111,636,000 gallons, it was stated.

Ohio Negotiating for Weber's Michigan Holdings

The Ohio Oil Company is negotiating with Weber Oil Company for purchase of the latter's Michigan oil properties, officials said last week, denying reports that sale had been consumated.

Weber Oil Company, of Bay City, a $150,000 company organized in 1934, has producing properties in the Reed City, West Branch and Clayton fields estimated worth 8 to 12 million dollars. The company has 15 producing wells, 14 drilling wells and over 800 acres of undrilled proven leases at Reed City.

The sale would represent the biggest dealing of its kind in Michigan oil history.

The Ohio Oil Company was inactive in Michigan from 1929 to 1940 but recently has increased its wildcat holdings and launched an active drilling campaign in Osceola and Roscommon counties.

Rincon Rules Revised

Rincon field rules in Starr County have been revised by the Texas Railroad Commission to provide for a net gas/oil ratio of 2000/1.

This revision was requested at a hearing before the commission last January by Continental Oil Company, in order that gas returned to the producing horizon shall not be considered in determining any well's ratio. The former rule provided only for a maximum gas/oil ratio of 2000/1. The revision is effective October 1.

Mexico

Oil Companies Consider Mexican Settlement

Proposals for settlement of the Mexican expropriation claims, developed by the United States State Department, last week were before the interested oil companies for consideration, but Washington officials admitted no doubts that the companies would find them acceptable. If agreed to by the companies it probably will be with reluctance.

The plan worked out by the department and the Mexican authorities calls for a "token" payment of some $9,000,000, establishment of a claims commission on which both countries would be represented, to fix a final value upon the properties, and payment of the amount thus determined, in oil to be delivered at probably 20 percent below the market price.

So far, Secretary Cordell Hull said, the companies have not appeared at the State Department to discuss the matter, but were expected to come in after they had thoroughly digested the Mexican government's latest offer.

The main attraction of the proposal, it was said in unofficial quarters, was the promise of a revaluation of the properties which might materially raise the purely nominal $11,500,000 set by the Mexican supreme court.

In some circles the offer was seen as the final one to be made to the companies prior to the development of an agreement by the two governments which would settle the controversy finally, but State Department officials insisted any views submitted by the companies would be carefully considered. The projected agreement involves advances of $60,000,000 or more to Mexico by the Washington government under the "hemisphere defense" program which calls for purchase by the United States of Mexican materials of military value which might otherwise go to Axis countries.

Europe

Swedish Shale Development May Outlast Emergency

Swedish geological authorities are reported as favoring the continuation of commercial extraction of oil from shale in Sweden at the close of the present war even though the product is too expensive to be normally competitive with petroleum. Following the outbreak of war and subsequent difficulties in importing petroleum products, the Swedish government was driven to invest about $1,300,000 to expand production of shale oil at the deposits in the Kinnekulle region, where a small volume of refining had previously been undertaken. Decision to work the shale at Kinnekulle was based on the facts that the oil content is higher than that found in shales elsewhere in the country and that the Kinnekulle shale is relatively easily accessible.

Economic data secured thus far in the operations at Kinnekulle indicate that the production cost for shale oil is three to four times higher than the cost of imported crude oil. However, if the war continues several years longer, thereby sustaining the present high prices for oil, there is prospect that investments in shale extraction equipment can be amortized within a reasonable period. The reason advanced for continued exploitation of the shale deposits after the war lies in the value a functioning industry would have in some future emergency. During World War 1, Sweden had no such pressing need of shale oil as exists today, and as a result no efforts were made to build up a large industry after 1919. Consequently, early in the present war, rationing of petroleum products became imperative, and in the last year Swedish automotive transport has been seriously curtailed. By maintaining extraction plants in working order and having a body of experienced workers available, Sweden could meet a petroleum shortage with greater ease than has been the case since 1939.

Estimates place the amount of oil shale in Sweden at about 360,000,000 metric tons, containing an average of 4 percent by weight of oil. Of the total quantity, a deposit of 250,000,000 tons is found in Ostergotland Province, 85,000,000 tons in Narke Province, and 25,000,000 tons in the Kinnekulle region. A drawback to working the Ostergotland shale is that much of it is covered by a thick cap of limestone. Furthermore, this shale has the lowest oil content of all the deposits in Sweden.

Hungary Conducting Extensive Exploration

European sources report considerable exploration has been under way this year in Hungary, where oil production is under 10,000 barrels per day. The Hungarian government has been prospecting for oil in the Bukkszek region in northern Hungary. Earlier in the year a German company secured through the Hungarian government the right to explore for oil and gas in the southeastern provinces taken over from Rumania. Under the agreement Hungary was to obtain a share of any profits accruing from the enterprise as well as priorities in deliveries of oil. The outcome of this exploration has not been reported.

A few months ago, over half the 143-mile pipe line being built by Hungarian-American Oil Industries Company from the company's Lispe field to refineries at Budapest was finished. Oil was being taken from the unfinished end of the line and transported by rail the remainder of the way to Budapest. At the time, Lispe was producing about 7000 barrels daily.

Turner Valley Output Is on the Increase

Because of flush production from Ace Royalties 1, recently completed in Turner Valley, Alberta, and testing in progress at five wells at which drilling has been discontinued, Turner Valley is now producing even more oil than its quota of 26,000 barrels daily.

The Conservation Board's report for the week of September 22 shows a daily Valley field yield of 27,857 barrels of oil daily from 164 wells plus 690 barrels of natural gasoline extracted in absorption plants. This compares with 26,142 barrels from 125 wells a year ago.

U. S. FIELD OPERATIONS

Oklahoma

Testing New Producing Zone in Cumberland Field

Pure Oil Co. testing new pay zone in Cumberland field; good well, may be link between old and new Hotulke sectors; Depew field extended north; Stephens County wildcat cores saturated sand; north edge of new Walnut Bend field defined.

Bryan County: Pure's 2-Little-210, SW SE SW 34-5s-7e, set 7-in casing 5547 ft to test McLish sand, new horizon for Cumberland field; earlier had 400 ft oil-cut mud and 1470 ft fresh oil in hole on drill-stem test 5600-5632 ft, flowed 80 bbls in 15 min on drill-stem test at 5632-42 ft, sand topped 5595 ft; operator's 3 Metz-105, SW NW SW 28-5s-7e, Marshall County, flowed 238 bbls oil in 24 hours while drilling, now below 4943 ft in Bromide, is 41st oil well for field.

Pottawatomie County: Smith Brothers Drilling Co. et al's Galbreath 1, SWc 23-9n-4e, swabbed 45 bbls oil per hr from 4546 ft in Second Wilcox sand, is on east side of West Hotulke sector and may indicate link with older Hotulke pool; Sun Oil Co.'s Kessinger 1, NWc SW 25-9n-4e, same sector, flowed 250 bbls oil first hr through perforations 4140-64 ft, Hunton lime; shut in for tankage.

Creek County: Fidelity Royalty Co. et al's Annie Starr 1, SWc SE 7-15n-8e, extends old Depew field one location east, 7-in casing 3758 ft, drilled 3774 ft in Wilcox sand, flowed 78 bbls oil in 24 hrs; operator's Starr 2, NE SE SW 7, drilling 3300 ft.

Stephens County: Louis Sikes et al's Dibbrell 1, SEc SW 16-1n-8w, west of Marlow, tested sand topped at 4980 ft with two 10-ft cores, second core had 6-ft well-saturated sand recovery, reaming down to core ahead.

Kansas

Barton County Showing Indicates New Pool

New pool for Barton County looming; wildcat spraying oil, may open new producing area; Phillips semi-wildcat favorable; Prusa pool extension test fails; Graham County wildcat has good oil fill-up.

Barton County: Eldorado Refining Co.'s Mehp 1, 18-14s-13w, 1 mile north of Hall-Gurnay pool, topped Gorham sand at 3245 ft, drilled to 3258 ft, and hole filled with 500 ft of oil in 4 hrs, testing; Helmerich & Payne's Schmidt 1, SEc NW 22-20s-15w, spraying est 15 bbls oil per day, 1,000,000 gas, total depth 3762 ft, prospective pool opener. Phillips Petroleum Co.'s Scheufler 1, C EL NE SE 24-20s-11w, running 7-in to test Kansas City-Lansing from 3335-3342 ft, samples reported showing oil stains; Hinkle Oil Co. et al's Frederick 1, SW NE 16-16s-11w, failed to extend Prusa pool, drilled to 3380 ft, Arbuckle dolomite, no shows and abandoned.

Graham County: Cities Service Oil Co.'s Montgomery 1, SEc NW 7-8n-23w, set 7-in 3826 ft, drilled to 4019 ft Arbuckle lime, filled 2100 ft with oil, acidized and was testing, apparently opens new pool northwest of Hill City.

Cowley County: Continental Oil Co. et al's Moore 1, SE NE NE 15-32s-5e, 1 mi east Frog Hollow pool, cored 3028-36 ft, Bartlesville sand, recovered stained core, 7-in 3028 ft; bailing down to drill plug.

Illinois Basin

Jackson County "Tight" Wildcat Sets Pipe

Casing set at Jackson County wildcat; Mill Shoals pool, White County, extended into Hamilton County; Franklin County wildcat completed; Clinton County wildcat completed as gas well; west outpost to Boos field, Jasper County, completed. Aux Vases production at Johnsonville, Wayne County.

Jackson County: Glenwood Oil Co.'s Traux-Traer 1, SE SW 36-7s-2w, 3 miles south small Benoist discovery completed several months ago, set casing 1990 ft, probably on top Renault lime; has been drilled "tight" and extent of any saturation not revealed.

Hamilton County: A. W. Cherry and Barron Kidd's Gardener 1, SE SE NE 24-3s-7e, half mile northwest production Mill Shoals pool, White County, set casing to test Aux Vases show at 3250 ft; a commercial well was indicated on drill-stem test.

Franklin County: Oil Carriers, Inc.'s Wayman 1, SW NW SW 1-6s-2e, 1½ miles north of Benton, pumped 80 bbls of oil and no water in 10 hours from Lower O'Hara, at 2843-51 ft. Test is two locations north of same operators' Kasper 1, recent Benoist discovery.

Clinton County: Texas Co.'s Price Gray 1, NW NW SE 35-3n-2w, completed as 17,500,000 ft gasser in Devonian at 2618-28 ft; shut in for disposal of gas; company may re-enter hole at some future date to test Benoist show at 1200-25 ft and to retest Devonian where oil saturation was cored.

Fayette County: Homer Luttrell's Ford 1, NE NE NW 31-5n-3e, cleaning out after 5-quart shot in Bethel pay at 1883½-90; pumped 50 bbls of oil and 6 bbls of water in 18 hours before squeeze. Carter Oil Co.'s Brauer 6, SE SE 21-8n-3e, Loudon pool St. Peter test, drilling at 2780 ft, is first in area scheduled to explore horizons deeper than Devonian lime, present deepest productive zone.

Wayne County: Wiser Oil Co.'s Ellison 1, SW SW NE 36-1n-6e, showing for commercial well in Aux Vases, first well to test formation in Johnsonville pool, productive so far only in McClosky lime; Aux Vases pay at 3070-3105 ft; total depth 3291 ft through dry McClosky; estimated good for 300 bbls a day. Production of the Johnsonville field was estimated at 64,000 bbls at the end of the week and was expected to surpass that of Fayette County's Loudon pool, former second ranking area in Illinois.

North Texas

Clingingsmith Completions Make Good Oil Flows

Confirmation tests for Clingingsmith pool, Montague County, earn large potential. Jack County assured of new oil strike in Bend. Granite reached in Ellenberger producing sector of Old Electra field. Montague County deep discovery flows by heads.

Clingingsmith Pool: Sinclair Prairie's Lemon 1, south offset its discovery, earned potential 3618 bbls oil and 1,162,000 ft gas, based on 3-hour gauge, used 1500 gallons acid in lower Bend 5970-90 ft, plugged back from 6680 ft. Company's McCall 1, west offset discovery, plugged back from Ellenberger 6888-6942 ft to 5980 ft for natural potential 2981 bbls through open tubing. Each given base allowable 70 bbls daily. Contractor rigged up for Hobbs 1, southwest offset discovery.

Montague Discovery: Walter Gant et al's Turner 1, 5½ miles northeast Bowie and ½ mile southeast of junked wildcat prospect, flowed 25 bbls oil hourly through casing on intermittent tests from Bend saturation 6223-38 ft. Insufficient gas to sustain flow. Turner 1 is 7¾ miles southwest of Clingingsmith pool, nearest producing area, and 8¾ miles northeast of Hults-Owen pool. Chapman-McFarlin et al's Fowler 1, 2½ miles east by north of Ringgold production, fulfilled 6000-ft contract in Ellenberger, topped at 5807 ft. The Bend zone proved dry, although oil saturation passed up in Strawn at 4835-57 ft is slated to be tested.

Jack County: Taubert-McKee and Sinclair Prairie's Hoefle 1, Asbury James Survey, 4 miles southeast Antelope, flowed oil on drill-stem test at 4803-35 ft in Bend, topped 4794 ft. Contractor's rig was damaged by fire, causing delay in running pipe for completion test. L. T. Burns et al's Wright 1, 5½ miles northeast of above prospect, was drilling at 5190 ft.

Electra Deep: Magnolia's Waggoner Est.-H&TC 34, SE NW H&TC Section 15, Block 13, Wilbarger County, encountered granite at 3357-62 ft, and has plugged back to 2985 ft to resume testing saturation in Ellenberger, topped 2883 ft, being highest of 4 Ellenberger tests in immediate area. In the South Electra field, Kemrow Co.'s T. L. Burnett 57-B, east offset to Magnolia's small Ellenberger discovery, plugged back to complete in sand 1905-18 ft after proving dry in Ellenberger zone 3620-3731 ft.

Archer County: Shell's Coleman 4-A, first Ordovician test for the Scotland pool, yielded water in Ellenberger 5751-5850 ft, 4½-in 5752 ft, and was swabbing small volume oil and water from Basal Mississippian, topped 5258 ft, perforated 5550-60 ft. Additional perforations will be made in upper portion of Mississippian. Company's Coleman 1-A, which opened the pool with Bend production, flowed 200 bbls. hot salt water hourly in Mississippian at 5468 ft. R. H. Hawn et al's Edwards-Texaco 1,

east outpost, cemented 5½-in on top Mississippian saturation 5575-78 ft. It is structurally low, having passed up possible oil yield with water in Bend 5224-87 ft.

Clay County: Shell's H. Henderson 71-C, second try for Mississippian production in the Antelope pool, found water in Mississippian and Ellenberger, topped at 5939 ft and 6053 ft, respectively, and acidized through perforations 5132-44 ft opposite Bend, logged at 5106-5355 ft. The pool's single Mississippian producer made prolific flow from 90-ft perforated section, with top of formation 5622 ft.

West Texas

Crockett County Wildcat Flowing From Crinoidal

Crockett County scores new Crinoidal pool 3½ miles west of Todd deep area. Shallow Permian oil strike pending for Conry-Davis pool, Pecos County. Southern Crane County semi-wildcat between Sand Hills and Abell areas testing promising saturation in Simpson. Second completion for Spencer reef-type structure make big flow through choke.

Crane County: Continental Oil Co.'s Jones 1, 1½ miles south of Ellenberger production in Sand Hills area, swabbing down through tubing, total depth 6004 ft, to test saturation in Simpson 5720-40 ft and 5905-21 ft. Permian-detrital contact at 5490 ft, elevation 2474 ft, affords higher structural position than nearest trio of wells, but Simpson beds unexpectedly encountered 5545 ft although absent in wells to north.

Pecos County: Texas Co.'s Williams 1, west offset to 3900-ft Conry-Davis pool discovery, established shallow oil level in flowing steady through drill-stem test in upper Permian 2210-2375 ft. Hole was cored to 2415 ft, where operations were halted to ream and possibly run pipe for production test. Stanolind's Conry-Davis 2, east offset discovery, flowed 254 bbls 31-gravity oil and 18 bbls water initial through ½-in choke, acidized perforations 3935-46 ft in lower Permian, or Tubb zone, making 4 producers. Geo. Abell, Skelly, Magnolia and Sinclair Prairie have one operation each. Pipe line connection will be available to area within 2 weeks.

Abell Pool: Magnolia's Silverman-State 3, south edge test, flowed 127 bbls oil first hour 1-in tubing choke, then 220 bbls next 3 hours ½-in, McKee sand 5379-88 ft.

Crockett County: Amerada et al's Todd 1-C, C SW SW GC&SF Sec. 15, Block 10, 3½ miles west of Crinoidal production in Todd deep pool, rated as new discovery with initial flow 87 bbls 38-gravity oil and 219 bbls water ¼-in tubing choke, perforated 6436-46 ft in Crinoidal, topped 6436 ft, elevation 2430 ft. Hole plugged back from 7143 ft after entering Simpson 6645 ft and Ellenberger 6975 ft. Partnership expanded Todd pool 1⅛ miles northwest in completing Tod 1-B, C SW SW GC&SF Sec. 26, Blk WX, flowed 85 bbls 40-gravity oil initial ½-in tubing choke, perforations 6048-65 and 6072-82 ft in Crinoidal, topped 6050 ft, elevation 2512 ft. Ellenberger section 6202-6300 ft yielded small volume oil and gas with sulphur water after acidizing, then plugged off. Latter treated with 6000 gals acid, but Todd 1-C not acidized.

Slaughter Field: Development of this expansive oil area shows no signs of being retarded by scarcity of pipe and tubing. Large interests carrying on bulk of drilling, and weekly volume of completions greatest in nation by wide margin. Transportation and market problems becoming acute for some operating units. Texas Co. with 36 operations, including 9 wells testing and 15 drilling, is absorbing its own production, using The Texas - New Mexico Pipe Line Co.'s facilities to Midland thence via Atlantic Pipe Line Company to Atreco, near Beaumont.

Ward County: Stanolind's Standard of Texas 1, north offset its Spencer pool discovery, flowed 718 bbls 29-gravity oil natural ⅜-in choke, gas/oil ratio 413/1, lime 2935-37 ft, elevation 2641 ft. The discovery flowed oil with water from lime 2920-90 ft, elevation 2634 ft. Shell's Sealy-Smith 1, projected Ordovician wildcat, was coring 5665 ft.

Deep Wildcats: Magnolia's State-Walton 20, between Keystone and Kermit fields, drilling chert 8350 ft, no shows since cementing protection string 7-in 8338 ft to be prepared to test Silurian due near this level. In eastern Upton County, Plymouth Oil Co.'s Alford 1 drilling black shale at 9610 ft. Humble's Ellwood 1, southern Mitchell County's first deep project, drilling shale and sand 6310 ft.

Coleman County Well Flows 22 Barrels Hour From Strawn

Northwestern Coleman County well makes natural flow from strawn. Taylor County's Merkel two-well pool has six operations.

Coleman County: Merry Bros. and Perini's Greer 1, southwest part Lot 2, Hiram Kegans Survey No. 520, 1½ miles south Goldsboro pool, flowed 88 bbls 43-gravity oil natural in 4 hours, with gas volume rated 4,000,000 ft daily, after drilling plugs; production from gray sand member of Strawn at 3909-37 ft; elevation 2018 ft.

Taylor County: Affording two oil levels, the Merkel area has six active operations, including Ungren & Frazier's Trinity University 1, SEc Lot 2, League 148, which is seeking 3-mile northwest extension, and drilling 2035 ft. W. H. Peckham et al's Buford 1, west offset to the pool's 2600-ft producer, passed up show oil in discovery sand 1997-2005 ft, and was fishing 2175 ft. Deep Oil Development Co. and J. H. Griggs' Higgins 1, ⅞ miles east by north production, skidded rig after junking hole at 2298 ft.

Jones County: Fain - McGaha Oil Corp.'s Hollis 1, SE NE NW T&P 26, Blk 15, perforating pipe opposite upper saturation after yielding small show oil and gas through perforations 2250-70 ft, having drilled to water at 2503 ft. T. J. Coyne et al's Clyburn 1, lot 24, Henry Millard Survey, A-243, to acid 2392-98 ft, which yielded free oil before cementing 7-in 2162 ft, elevation 1627 ft. Hedrick Oil Co.'s Morrison 1, southeast edge Wimberly pool, flowed 20 bbls oil first half hour from upper pay 2221-30 ft; elevation 1734 ft.

Stephens County: Orion Daniel et al's Green 1, southwest offset to their wet gas discovery in northwest part county, perforating 7-inch cemented on bottom 3342 ft to test bend saturation, topped 3309 ft.

East Texas

East Texas Field Has Produced 1,664,780,171 Barrels

Fourth test in Pittsburg pool reaches Travis Peak pay. Cayuga deep pay extended into Freestone County with gas-distillate producer. Henderson County deep wildcat maintains flow. Limestone County wildcat nearing Lower Marine. East Texas field enters eleventh year.

Camp County: Gulf's Stewart 1, south offset to production in Pittsburg pool, entered first Travis Peak saturation 7931 ft, coring 7940 ft, elevation 378 ft. Talco Asphalt & Refining Co.'s McKenzie Shell 1, ¾-mile west outpost, shut in to build up pressure and may require pumping although shot and acidized, broken pay 7956-8203 ft.

Henderson County: British-American Oil Producing Co.'s Young 1, which has been for some weeks in lower Glen Rose saturation, flowing 4 bbls fluid hourly, 42 percent oil, with gas volume rated 750,000 ft daily.

Cayuga Deep: Amerada's Berk 14, first Trinity test for Freestone County sector of field, was showing gas and distillate while unloading through tubing, perfroated opposite 4 zones of saturation between 7430-7614 ft in Lower Glen Rose, topped 7370 ft, elevation 257 ft, making total of 5 gas-distillate producers and a small oil well in the Lower Glen Rose.

Barron Deep: Bert Weekley et al's Barron 2-A, southeast outpost for this single Limestone County deep gas-distillate pool, was making small heads of low-gravity oil, gas and acid residue when swabbed at intervals from 3 porous zones in Pettit, topped 5690 ft. Well is bottomed at 5786 ft with 5½-in at 5685 ft. Rising pressures indicate that it will develop into a gas-distillate producer.

Lower Marine Projects: Farrell Drilling Co. and Frank Bryan's Gilliam 1, western Limestone County, was drilling 4410 ft in Travis Peak, topped 3740 ft. In Red River County, Magnolia's Henry 1 was drilling 3145 ft, having proved dry in Paluxy, topped 2396 ft.

Chapel Hill: Shell has authorized immediate drilling of Amos Ford 1, 102.7 acre tract, P. Lively Survey, northeast edge, and G. W. Longley 1 on 142-acre tract, John Wolfe Survey, north outpost. Sun Oil Co. is active on 2 sites, and Chapel Hill Gas System's Walton 1 drilling 6600 ft. Sinclair Prairie's Carithers 1, its initial test, cemented surface pipe, and C. R. Starnes' Jackson 1 completed cellar and pits, making 7 active and projected operations. Overall cost of oil and gas-distillate completions this area has been lowered to about $55,000 when drilled by contract.

East Texas Field: October 3 marked the beginning of the eleventh year that this area has been a source of high-gravity oil. Development of the 133,000 proved acres has been continuous, and currently the field has 24 operations, including 12 drilling tests. Producing wells have declined from a peak of 26,061 mid-August, 1939, to 25,899 with a sharp gain in abandonments in recent months. Field is credited with producing 1,664,780,171 bbls, or an average of 12,750 bbls per acre, during first decade after C. M. Joiner's Daisy Bradford 3 provided the first production.

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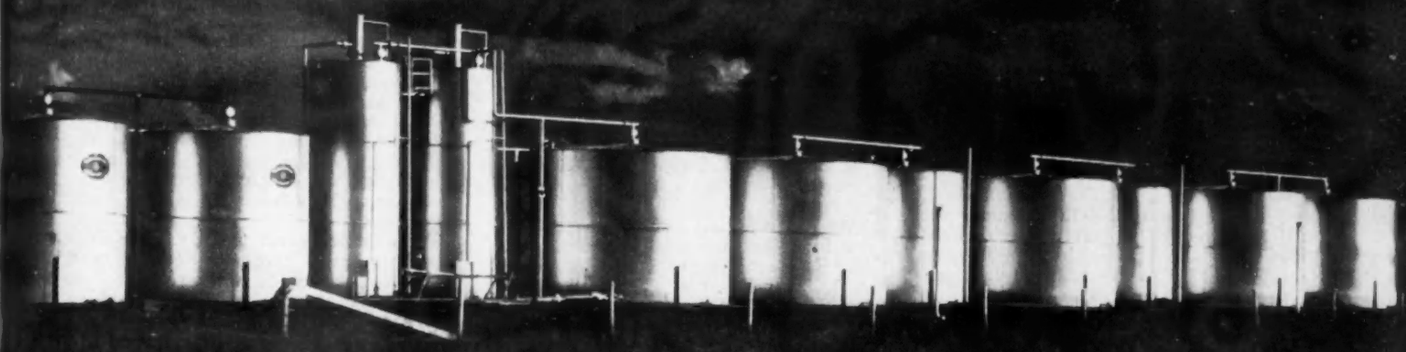

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THE PARKERSBURG RIG & REEL COMPANY
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DALLAS HOUSTON - TULSA - LOS ANGELES - NEW YORK

THE PARKERSBURG RIG AND REEL CO.

PARKERSBURG DEPENDABLE LEASE STORAGE TANKS

Southwest Texas

Two Wells Open New Jackson County Fields

After discovery of new Marginulina field in Jackson County, wildcat 9000 ft. southwest logged the sand almost flat and is being completed. Acreage is sufficiently scattered to indicate an extensive drilling program. New play is starting west of Agua Dulce following discovery of production on flank.

Lower Gulf Coast: Moore & Ahern et al's Burditt 1, nw cor tr 10, Woolfolk sub, 2 mi sw LaWard fld, 3½ mi ne Texana fld, Jackson County comp 112.8 bpd 25.8 gr plo ⅛ ch 600 lbs tp, 660 lbs cp, pf 5207-26 ft; Marginulina osd 5202-26 ft. Opens pool.

H. M. Christie et al's Pickering 1, 9000 ft sw above well, blk 25, osd 5203-20 ft, sh 5203-23 ft, dst 5204-13 ft failed, dst 5201-13 ft rec 100 ft partly muddy 24.8 gr o 475 lbs wp, 1700 lbs bhp flowing 12 min, set 5½ in cas 5223 ft, dr plugs to perf.

Magnolia's C. Conkle 1, lot 8, blk 6, 3750 ft e extension LaGloria fld, Jim Wells County, logged sd 7138-68 ft, dr to 7500 ft, perf 7155-57 ft, comp as gas-dist well.

Sam E. Wilson, Jr., and Gulf Plains Corp.'s M. L. Rivers 1, sec 18, 1½ mi w Augua Dulce fld, Nueces County, pb fr 7114 ft, perf 5830-50 ft, flowed 171.9 bod 42.8 gr plo ⅛, 1300 lbs tp, 1900 lbs cp, gor 840-1. Extends fld, opens crude prod on w flank. Three outposts active on west flank.

Transwestern Oil Co.'s McFaddin 1-F, w outpost N. McFaddin fld, Victoria County, perf in Sinton sd 5193-95 ft w/12 flowed est 2000 gas, slight spray dist 3/16 ch 2085 lbs tp, 2095 lbs cp.

Henshaw Bros.' John Hancock 1, Sec 13, 2 mi s Sinton, San Patricio County, cord sand oil odor 5557-62 ft, dr 6500 ft to 7200 ft cont. Will run electric log and may test higher.

Wellington Oil Co.'s Welder 3-B, possible disc new sand Odem, testing 6751-55 ft. Would be deepest crude sand in San Patricio County fld.

Pettus Trend: Joe Stelzig et al's Everett et al 1, tr 3408, blk 72, 1 mi s White Creek fld, Live Oak County, flowed 23 bpd 20 gr 1-in ch 45 lbs tp, 420 lbs cp fr perf 1844-52 ft w/60. Opens fld in Ezzell sd. Two loc w, Simmons Oil Co. and Moore Dev. Co.'s Kline 1, crd sand 1808-20 ft, dst 1808-23 ft rec 1400 ft o, good gas blow 15 min, 600 lbs bhp, set cas.

Chittim Anticline: Wellington Oil Co. cored second oil show in Georgetown li in Chittim 2, e of Chittim fld, Maverick County, at 3227-47 ft, dst 3400-47 ft rec 210 ft o and g cut mud 1½ lbs wp, 600 lbs bhp 20 min, now coring for Edwards li below 3830 ft.

Wilcox Trend: Shell's McManus 1, Brushy Crk pros, Lavaca County, still testing gas and dist through perf above 11,000 ft in Wilcox.

Normandie Oil Co.'s Smolik 1, s Halletsville, Lavaca County, logged show in Cockfield, dr ahead to Wilcox below 8000 ft.

Rio Grande Valley: Sun's Yturria Land & Live Stock Co. 1, Por 100, 16 mi e Rio Grande City, Starr County, flowed 21 bbls 44.2 gr o plus 1½ bbls sw 24 hrs 7/64 ch 1200 lbs tp, 1550 lbs cp, perf 4232-33 ft in Frio. Gor 17,481-1. Opens fld.

Texas Gulf Coast

More Wells Staked In Brazoria County

Two wildcats staked in Brazoria County; Wilcox test in Montgomery County drills deeper after setting depth record.

Brazoria County: H. A. Potter and C. L. Archer have staked McDonald 1, 9000-ft test on geophysical high between Friendswood and Hastings. If production not found in Frio, test will be carried to Vicksburg; will be watched as possible link between two reserves. It is located 424 ft from ne line of lot 66, and 513 ft se of common corner of lots 66 and 67, Jenkins subdivision, Warren D. C. Hall sur. Humble owns large block southeast of location.

H. E. Hamilton is spudding Smith Est. 1, 1½ mi east of east flank Lochridge field, on 40-acre tract, J. W. Hall sur, 1500 ft east of Oyster Creek. Morris-Hamilton is contractor, projected depth being 7000 ft. Shell has leased 1426 acres of Ramsey Prison farm lands to the south; Gulf has north, east and west offsets.

Montgomery County: Superior is drilling near 13,000 ft in McWhorter 1-B, Lake Creek area, after setting new depth record for upper Gulf Coast when 12,000-ft level was reached. Regular producing horizons already have been logged in well which is mile outpost from discovery.

Glenn H. McCarthy's Seyle 1, Magnolia area, has drilled to 10,009 ft and set pipe for test. Several gas and distillate sands in the Wilcox above 9500 ft will be tested.

Atlantic's Foster 1-A, Fostoria area, is waiting orders at 11,000 ft in Wilcox. Few, if any, sands were logged indicating production, however, hole may be deepened.

Polk County: Pan American staked second wildcat in Goodrich area, Goodrich Community 1, while attempting to retrieve stuck drill pipe at 9966 ft in Texas Long Leaf 1, 1 mile southeast of new location. Pan American has large Wilcox block for exploration with Heyser, Heard & Clardy as contractors on new well.

At Segno, Gulf's Wing 48 is testing through perforations at 10,080-110 ft in Wilcox. Deepest well drilled in the field, it so far has failed to yield oil between present perforations and 11,743-ft bottom.

Austin County: Woodley's Polcak 1, northwestern part of county, cored shale 5740-5818 ft, no shows. Correlation is difficult since no wells have been drilled previously in area. Cockfield picked at 2656 ft, Cerat. 3831-61 ft, Operculina 4261-91 ft, Smithvillensis 4741-80 ft, Claiborne 4842-72 ft.

Wilcox Trend Geophysics: Pan American has crew working a 20,000-acre option block northwest of Willis and west of New Waverly in Montgomery County. Continental crew is conducting reflection work west of Conroe. Cities Service is making gravitymeter survey in Austin County. Shell has reflection seismograph working west of Sealy, Austin County.

Louisiana Gulf Coast

Napoleonville Wildcat Indicates New Field

New field indicated on flank of Napoleonville dome, Assumption Parish; well in Point au Fer district, Terrebonne Parish, completing as gas-distillate producer.

Assumption Parish: George H. Echols and J. Ray McDermott's Armelise Planting Co., east flank of Napoleonville dome, is preparing to make production test after logging sands at 8344-69 ft, 8385-8413 ft, 8734-38 ft, verified by sidewall samples. Salt topped at 8897 ft, total depth. Well is 2400 ft east of Falcon-Seaboard's dry hole which topped salt at 6160 ft. The well, if a producer, will be the Houston operator's third discovery in Louisiana this year, others being St. Gabriel and Westwego.

Terrebonne Parish: Barnsdall's Nelson Development 3, Point au Fer prospect, perforated at 6750-55 ft where drill-stem test flowed at rate of 2,100,000 cubic feet gas daily, ¼-in choke on bottom, ⅜-in on top, with distillate. Producing sand is 254 ft higher than in previous wells. Another test due to be drilled in area.

Gulf's Picou 1, Lapyrouse area, still testing various sands up hole. Cement retainer was set at 10,900 ft. Well flowed oil to prove structure from this level before going to salt water.

Vermilion Parish: Union Oil Co.'s School Board 1-A, East White Lake area, opens new area for drilling with well completing in new sand at 6400 ft. Well flowed 232 bbls net oil in 24 hours through 5/32-in choke, tubing 1050, casing 500. Oil is 36.4 gravity, gas/oil ratio 600:1.

East Baton Rouge Parish: William Helis and Louisiana Progress have staked a 10,000-ft test, Nelson 12, in University field. Well, which will be one of deepest ever drilled in field, is in 36-7s-1w.

Rapides Parish: M. H. Marr of Dallas has staked Eota Realty 1, 6000-ft test in South Catahoula Lake area, NE 14-4s-3e. Location is on 8000-acre block assembled by O. G. Collins. After acquiring half the bolck Marr is reported to have sold half of his interest in 4000 acres to Phillips Petroleum Co. and Carter Oil Co. Gilger Drilling Company, Houston, is contractor.

North Louisiana

LaSalle Parish Well Extends Two Fields

A test north of Nebo and west of Trout, two shallow Wilcox oil fields, LaSalle Parish flows oil; location made for 6000-ft test in Haynesville field; much activity in Olla trend despite several abandonments.

Outpost Flows Oil: H. L. Hunt's Goodpine F-20, SW SE 25-8n-2e, LaSalle Parish, two miles north of production at Nebo and about the same distance west of Trout production, was flowing 200 bbls of oil daily last week from 3435 ft, indicating extension of one or other fields or possible connecting link. A 24-hour gauge not yet made.

Travis Peak Test at Haynesville: T.

LEASE STORAGE TANKS

L. James made location for proposed 6000-ft Travis Peak test in shallow Blossom sand producing Haynesville field, Claiborne Parish, at Akin 1, SE SE 27-23n-8w.

Olla Trend: Despite abandonment of six wildcats in "Olla trend" last week, much activity in drilling and leasing continues. Wildcats abandoned in Catahoula, Grant, LaSalle and Tensas parishes. The series of shallow fields in this trend appear to be along a southeast-northwest axis. H. L. Hunt's Louisiana Central A-2, NW SE 9-9n-6e, Catahoula Parish, deepest test so far made in this trend and is drilling below 8190 ft. Phillips Petroleum Co., which with Carter Oil Co., discovered Larto Lake field, Catahoula Parish, will operate the joint properties.

Wildcat Disappoints: J. E. Stack and associates' Cook 1, SW NE 32-13n-14w, DeSoto Parish wildcat, that flowed oil by heads after acidizing at 2858 ft, on latest gauge showed only 5 bbls of 42-gravity oil daily and 50 bbls salt water.

Arkansas

McKamie Defined Southeast; New Horizon at Schuler

McKamie field defined to southeast by dry hole; second test to reach lower Marine in Macedonia, Columbia County, shows oil in that horizon; new well in Buckner townsite; preparations made for another Smackover lime wildcat as another spuds; new horizon at Schuler.

McKamie Defined: The southeast limits of McKamie gas/distillate field, LaFayette County, defined by abandonment at 9334 ft of Frankel and Associates' Cornelius 1, SE NW 28-17-23. Four other tests drilling in that field, deepest Carter Oil Co.'s Cornelius 2, C NE 31-17-23, coring 9290 ft.

Macedonia Test Shows in Lower Marine: Just as in the discovery well at Macedonia, Columbia County, which eventually was completed in Smackover lime, the second test to reach lower Marine there showed some oil in that horizon, in Atlantic Refining Co.'s Warnock 1, N ½ SW 15-18-21, which in core 6921-41 recovered 10 ft porous and saturated oil sand, brown ether cut, and 3 ft sand and shale breaks, drilling ahead 7044 ft, elevation 258 ft. Magnolia Petroleum's Franks-Norwood 1, N½ SE 16-18-21, cored 6925-49 ft without recovering any saturated sand, and drilled ahead; elevation 279 ft. Two other tests at Macedonia drilling, one below 8800 ft.

New Buckner Townsite Well: Love & Owens' Eddy B-1, SW NE 12-16-23, Buckner townsite well, completed 7287 ft, flowing 30 barrels oil per hour ¼-in choke, no salt water, tubing pressure 240 pounds.

Deep Wildcat Prospects: Atlantic's Davis 1, NE NW 15-17-18, long-heralded Smackover lime wildcat, spudded as Barnsdall's proposed Smackover lime wildcat in NE 10-15-24 or NW 11-15-24, LaFayette County, prepared to start by December.

New Horizon at Schuler: Marine Oil Co.'s recently completed Justiss 6, Lot 7, NW 18-18-17, opening lower Marine (Cotton Valley) as new producing horizon, not only adds to reserves there but will probably start new drilling as well.

Michigan

Reed City Completion Good Flow From Traverse

A 4000-barrel well in Traverse lime at 2944 ft at Reed City, where all previous completions have been in 3600-ft Monroe horizon, may start important secondary drilling campaign. Small discovery in Allegan County.

Reed City: Pure's Gingrich 1, C N½ SW SW 30-18n-10w, completed for 4000 barrels from Traverse lime at 2944 ft. At least 50 percent of other 47 completions over a 2100-acre area showed probable commercial production or saturation in the same zone, but all wells have been completed in the 3600-ft Monroe. Showings in the Traverse, while not as uniform and generally below the production ratings of the deeper lime beds, had been good enough to indicate several weeks ago that a Traverse drilling campaign would be carried on eventually. Operators, already hard pressed to maintain offset drilling schedules and fearing further troubles with reduced supplies, have disregarded the Traverse. However, Pure's completion which rates better than the majority of the Monroe lime wells, is expected to bring immediate drilling for this horizon, especially on the west flank where the Monroe has not shown high potentials.

Allegan County: Clifford Perry's Shafer 1, NW SE NW 18-3n-12w, Hopkins Township, acidized from 30 to 160 bbls day in Traverse lime at 1573 ft for first promising discovery this year in southwestern Michigan.

Deep Test: Gulf's Bateson 1, Section 2-14n-4e, Bay County, State's record depth test, is having its commercial possibilities jeopardized by a water cut in the 7790-ft Salina gas-distillate pay. Last production tests showed at an average 2½ million gas flow well stipping from 39 to 61 bbls distillate with water production ranging from 17 to 30 bbls.

Rocky Mountain Area

Colorado and Wyoming Wildcats Show Promise

Wildcats in Colorado and Wyoming at critical depths indicating possible pool openers, while a third wildcat midway between Cut Bank and Kevin-Sunburst made a gas well indicating a possibility of linking of Montana's two major oil fields.

Iron Springs: Great Divide Petroleum Co.'s Wyatt 1, NW NW SE 6-9n-92w, Iron Springs structure, Moffat County, Colorado, logged 47 ft oil-saturated sand 1647-94 ft in the post-Larmaie, and is running electric log. Hole bottoms at 1700 ft.

North Hiawatha: Vermillion Oil Co. and Johnson & Horton's Government 1, SW SE SW 6-12n-99w, on the unproved north dome of the Hiawatha uplift, Sweetwater County, Wyoming, side of the structure, is running 10¾-in casing to bottom at 2074 ft as it nears objective gas sands in the lower Wasatch. The semi-wildcat developed 1 million ft at 1530 ft in upper Wasatch.

Midway Area: Glacier Production Co.'s Potters Unit 1, C 31-34n-5w, midway between Cut Bank and Kevin-Sunburst, northern Montana, is completing for a small gas well in sand at Ellis-Madison contact 2400-2412 ft. Well bridged back from bottom at 2480 ft. Well had Sunburst 2225-52 ft, show of gas; upper Cut Bank from 2256-82 ft, with 500,000 ft of gas; no lower Cut Bank, and Ellis top at 2307 ft.

Dakotah High: Western Petroleum Corp.'s Mosier 1, SW SW 31-35n-64w, Dakotah High structure, Niobrara County, Wyoming, which had substantial gas flows in Morrison and Sundance formations, was a disappointment in the Minnelusa, failing to find a good sand in the Leo. Test is suspended at 2220 ft in dolomite.

California

Four Spots Report Favorably During Week

New deep zone field discovered in Kern County; gas and distillate field discovery in Fresno County; favorable indications reported on another new producing area in Newhall-Castaic area of Los Angeles County; while favorable showings made on formation test of Puente Hills wildcat in Los Angeles County.

Fresno County: Formation test on Amerada Petroleum Corp.'s Clover 31-34 wildcat in the Cloverdale-Helm area, bottomed at 10,257 ft, plugged at 7970 ft, on formation test with packer at 7925 ft, demonstrated gas blow of 10,000,000 ft daily, recovery consisting of 378 ft of fluid including 114 ft of distillate and 264 ft water through a ½-in bean with valve open 17 minutes. Operator is preparing to run casing and attempt completion.

Kern County: Continental Oil Co. appears to have opened another deep producing area in the Shafter area with KCL No. C-2 wildcat in 35-27-24; test flowed at 542 bbls daily rate, 36.8-gravity oil, cutting 10 percent water, with 100 lbs flow pressure, through a 48/64 bean. After beaning back to a 4/64 well was reported producing 154 bbls daily rate, 38-gravity oil cutting 1 percent with 160 lbs on tubing and 990 on casing, and making 150,000 ft gas. Bottom is at 12,934 ft, plugged to 12,811 ft with water string at 12,807 ft.

Los Angeles County: Aztec Oil Co.'s Sanborn 1 wildcat in 6-3-16, Newhall-Castaic area, is reported to have topped a very loose sand or gravel which corresponds to Barnsdall third zone at 5775 ft. Well is bottomed at 6113 ft in sand. While unable to obtain cores in loose materials encountered, side-wall samples show good cut and odor. Casing is being run.

Sunset Oil Co.'s Baldwin 1, Sec. 11-2-11, Puente Hills area, bottomed in black shale at 4680 ft on formation test with valve open 30 minutes, showed strong blow of gas in 3 minutes through ⅜-in bean, recovery consisting of 31 stands of fluid, including 16 stands of gas-cut mud, remainder showing frothy oily gassy mud and water. Heads of gas were noted while coming out with drill pipe. Operator is running water string to 4500 ft and will perforate interval 4320 ft to bottom opposite best sand streaks cored.

UNITED STATES WELL COMPLETIONS

Arkansas

Company, Well and Location	Init. Prod. Bbls.	Depth
Clark County (Wildcat)—		
Coker & Grievas, Williams 2, 7-11s-19w	*	665
Columbia County (Magnolia)—		
Porter & Perry, Baker 1, 13-17-20	*	3700
Columbia County (Stephens)—		
Fitzwater & McClerkin, Allen 1, 14-15-20	50	3424
LaFayette County (McKamie)—		
Frankel et al, 28-17-23	*	9334
LaFayette County (Buckner)—		
Love & Owens, Eddy B-1, 12-16-23	720	7287
Union County (Wildcat)—		
Delta Drlg. Co., Pickering 1, 32-18-16	*	7970
OLD WELL DEEPENED		
Ouachita County (Smackover)—		
Gulf, Fincher 9, 33-15-16 (otd 2207)	57	2516

California

Company, Well and Location	Init. Prod. Bbls.	Depth
Fresno County (Coalinga Old Field)—		
Section 30 Oil Co., No. 9	12	1275
Kern County (Greeley)—		
Standard, KCL 11-28	3180	11,510
Kern County (Midway)—		
Trico Oil & Gas Co., Fee 3	*	1565
Kern County (Mount Poso)—		
Ring Oil Co., Bowles 29-12	300	1727
Bowles 29-13	350	1753
Shell, Security 30	144	1970
Texas, Alta Vedder 15	213	1825
Kern County (Mountain View)—		
Richfield, W. Mt. View 1	*	6655
Kern County (Richgrove)—		
Shell, Smith 56-X-11	210	2361
Los Angeles County (Athens Area)—		
R. S. Lytle, Anderson 2	*	9504
Los Angeles County (Del Valle)—		
R. E. Havenstrite, Lincoln 7	837	6076
Standard, Supulveda 1	720	5828
Los Angeles County (Dominguez)—		
Shell, Reyes 125	172	4185
Los Angeles County (Inglewood)—		
Federal Oil Co., Smith 3	910	8200
Tide Water, Vickers 70	1390	8256
Los Angeles County (Rosecrans-Athens)—		
Royalty Service Corp., Gordon 3	60	8312
Los Angeles County (Wilmington)—		
Atlantic, Water & Power 2	...	3612
Union Pacific, UP 197	910	4010
UP-E-36	499	3480
Santa Barbara County (Santa Maria)—		
Dome A-15	28	3828
Ventura County (Rincon)—		
CCMO Co., Hobson C-9	161	9337
Ventura County (Avenue)—		
Shell, Taylor 101	132	6950

*Failures; †Junked; ¶Million cu. ft. gas.

Kansas

Company, Well and Location	Init. Prod. Bbls.	Depth
Barton County—		
Gulf, Joseph 3, 60 ft e of c nw sw 29-16s-11w	200	3323
Geo. Johnston et al, Oeser 2, c e½ se nw 30-16n-11w	3000	3035
Cities Service, Hoffman "B" 6, c e 1 ne sw nw 7-16s-13w	*	3376
Shell, Ehrlich "B" 8, se nw se sw 1-16s-14w	3000	3332
Batt "B" 3, se ne se 2-16s-14w	1079	3303
Skelly, Schneweis 1, c s½ sw sw 5-17s-11w	100	3376
C. E. Ash et al, Schartz "B" 3, c w½ se sw 7-20s-11w	3000	3322
Sharon Drlg., Herter 1, c s½ nw ne 17-20s-11w	1058	3311
Lebo & Gussman, Schrepel 1, c e½ ne se 26-20s-12w	*	3425
Helmerich & Payne, Unruh 1, nw nw ne 30-20s-15w	*	4012
Butler County—		
Cromwell & Lewis, Reetz Est. 4, sw se se 34-27s-5e	400	3120
Simpson Oil, Owens 4, ne nw ne 19-29s-4e	*	1953
Cowley County—		
Deep Rock, Daniels 1, sw sw ne 10-30s-3e	*	2968
Palmer Oil et al, Defore 1, se sw se 23-30s-3e	*	3415
Pryor & Lockhart, Bice 1, se se se 24-30s-5e	*	2988
Leader Oil et al, Moon 4, nw nw nw 21-32s-5e	280	3055
Ellis County—		
T. M. Deal, Bemis 4, c e½ sw ne 4-12s-17w	160	3660
Ellsworth County—		
Branine & Goering, Stumps 2, c w½ se sw 33-17s-10w	451	3263
Greenwood County—		
Bisagno, Imthrun 1, c s½ se ne 31-25s-13e	*	1681
Kearny County—		
Stanolind, Patterson 1, c e½ se se 23-22s-38w	3000	5690
Jefferson County—		
Longwell et al, Miller 1, c sw se 29-8s-20e	*	1740
Magnolia, Myers 1, c se sw 32-9s-20e	¶7,643	1531
Mossbacker et al, Stroud 1, c sw ne 20-10s-20e	*	1531
Marion County—		
Harwood Oil et al, Novak 11, sw se sw 28-17s-4e	322	2375
Urshell et al, Hershorn 2, c n½ nw nw 21-21s-5e	*	2276
Pawnee County—		
Hall-Jordan, Belt 3, c s½ nw nw 13-20s-16w	3000	3837
Phillips County—		
Cities Service, Ray "B" 2, nw ne se nw 32-5s-20w	1661	3585
Pratt County—		
Skelly, Ganaway 1, c e½ ne se 30-28s-12w	*	4683
Rice County—		
Derby, Mehl 1, sw sw sw 14-18s-10w	*	3305
Kiowa Drlg., Patterson 1, nw ne nw 23-19s-9w	*	3312
Westgate et al, Johnson 5, c n½ se se 24-20s-6w	362	3317
Branine & Holl, Warner 18, c s½ sw ne 16-20s-10w	497	3164
Beardmore, Mantel 4, c n½ se ne 18-20s-10w	1631	3332
Oberle 2, se ne se 18-20s-10w	395	3124
A. B. Holland, Hauschild 2, ne sw se 11-21s-7w	*	3426
Rooks County—		
J. J. Hall, Door 1, c w½ nw se 13-9s-16w (pg 3310)	192	3351
Russell County—		
Transwestern, Polcyn 5, c s½ nw nw 14-14s-15w	367	3229
Central Pet., Hilgenberg 1, c e½ se nw 20-15s-12w	252	3298
Skelly, Kluesner "B" 1, 230 ft s of nw nw ne 34-15s-12w (pb 2999)	*	3312
Stanolind, Letsch "B" 1, c s½ se sw 4-15s-13w	3000	3020
Cummings & Alladin, Mudd 1, c w½ sw ne 6-15s-14w	11	3181
J. C. Shaffer, Vonfeldt 2, c w½ se nw 6-15s-14w	60	2957
Cities Service, Krug "F" 2, c s½ nw ne 13-15s-14w	1196	3345
Krug "A" se sw ne 24-15s-14w	963	3342
Sherman County—		
Ingling & Parker, Tompkins Community 2, c e½ se sw 18-8s-39w	¶.05	1060

[*Continued on next page*]

Summary of Drilling Operations in the United States, Week Ended October 4, 1941

	WELLS COMPLETED								PERMITS FOR NEW WELLS[1]				
	Total for Week	New Wells Drilled for Oil and Gas: Oil Wells	Gas Wells	Failures	[3]Miscellaneous	Initial Production	Total 1941	Total this Date 1940	This Week	Total this Month	Total 1941	Total this Date 1940	Year Total 1940
Alabama	.....	.....	.....	.....	.....	.....	2	6	.....	.....	.....	.....	.....
Arkansas	7	2	.....	4	1	827	130	144	6	6	143	118	153
California	22	19	.....	3	.....	10,228	885	871	22	22	906	816	1,042
Colorado	.....	.....	.....	.....	.....	.....	14	7	.....	.....	.....	.....	.....
Florida	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Georgia	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
[4]Illinois	.....	.....	.....	.....	.....	.....	2,850	3,106	.....	.....	3,541	3,568	4,532
[4]Indiana	.....	.....	.....	.....	.....	.....	401	372	.....	.....	[2]2159	.....	.....
Iowa	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....
Kansas	52	29	2	17	4	37,448	1,725	1,543	36	36	1,773	1,566	2,048
[4]Kentucky	.....	.....	.....	.....	.....	.....	246	271	.....	.....	[2]112	.....	.....
Louisiana	43	29	3	11	.....	3,284	1,157	1,295	13	13	1,324	1,270	1,658
Michigan	23	13	2	8	.....	14,435	636	937	17	17	672	885	1,093
Mississippi	16	12	1	3	.....	6,773	156	149	.....	.....	.....	.....	.....
[1]Missouri	.....	.....	.....	.....	.....	.....	36	17	.....	.....	9	12	26
Montana	17	11	3	3	.....	1,721	161	144	.....	.....	.....	.....	.....
[1]Nebraska	2	1	.....	1	.....	420	68	13	5	5	87	24	69
New Mexico	10	9	.....	1	.....	1,247	288	516	7	7	314	465	559
New York	29	17	.....	.....	12	149	758	787	.....	.....	.....	.....	.....
Ohio	45	16	13	9	7	354	1,329	777	.....	.....	.....	.....	.....
Oklahoma	51	31	2	12	6	9,431	1,689	1,634	59	59	1,765	1,405	1,888
Pennsylvania	66	38	10	1	17	45	3,155	2,841	.....	.....	.....	.....	.....
South Dakota	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....	.....	.....	9	8	.....	.....	.....	.....	.....
Texas	258	177	7	67	7	84,747	7,989	7,775	250	250	9,438	8,639	11,170
Utah	.....	.....	.....	.....	.....	.....	2	2	.....	.....	.....	.....	.....
West Virginia	12	1	9	1	1	26	535	434	.....	.....	163	619	782
Wyoming	7	4	1	2	.....	497	109	116	.....	.....	.....	1	1
Total this week	660	409	53	143	55	171,632	24,336	23,767	415	415	20,406	19,388	25,021
Total last week	653	419	56	128	50	199,949	23,377	23,246	687	2,324	19,991	18,996	25,021
Total this year	24,336	14,778	1,839	5,278	2,441	6,702,685	.....	.....	.....	.....	.....	.....	.....

[1] This tabulation includes those states where weekly data are available; figures for Missouri date from August 10, 1940; Nebraska from August 3, 1940.
[2] No data available before June 14, 1941.
[3] Includes old wells deepened, water-intake, gas input, and salt water disposal wells.
[4] Data not available.

United States Well Completions—*Continued*

Company, Well and Location	Init. Prod. Bbls.	Depth
KANSAS—Continued		
Stafford County—		
Bodine Drlg., Willcutt 3, c e½ ne ne se 4-21s-13w (pb 3419)	*	3429
British American, Meyer 5, se sw ne 28-23s-12w	3000	3849
Landon et al, McClure 1, c e½ ne sw 15-24s-11w	99	3827
OLD WELLS DEEPENED		
Ellis County—		
Champlin, Hadley "D" 11, c n½ sw sw 17-11s-17w (otd 3750)	1578	3480
Greenwood County—		
K. T. Weidenman et al, Lewis "S" se ne sw 25-27s-8e (otd 2426)	250	2750
Harvey County—		
Magnolia, Kattie Smith 2, ne nw ne 30-22s-3w (tod 3526)	120	3563
Stafford County—		
Stanolind, Fuller 1, se se sw 11-24s-11w (otd 3776)	2764	3814
South Louisiana		
Calcasieu Parish (Vinton)—		
E. H. Robertson, Vincent Hrs. 2	117	3825
Cameron Parish (Cameron Meadow)—		
Magnolia & Humble, Cameron Meadow 33	113	1342
Evangeline Parish (Ville Platte)—		
Continental, Fontenot 3	320	10,324
Evangeline Parish (Pine Prairie)—		
Pan American, Guillory 1	260	8375
Iberville Parish (Bayou Blue)—		
Union Sulphur, Schwing 3	177	7043
Jeff Davis Parish (Woodlawn)—		
Union Sulphur, Trimble 6	243	8350
St. Charles Parish (Paradis)—		
Texas Co., LLE-Paradis 13	485	10,400
North Louisiana		
Bossier Parish (Bellevue)—		
Premier Inv. Co., Wyche 55, 14-19n-11w	10	424
Wyche 58, 14-19n-11w	8	425
Wyche 59, 14-19n-11w	12	426
C. H. French, Larkin 9, 14-19n-11w	8	395
Tide Water, Lodwick Lbr. Co. J-7, 10-19n-11w	*	415
Catahoula Parish (Wildcat)—		
R. L. Fisher, Bradford 1, 29-7n-5e	*	5886
Caddo Parish (Pine Island)—		
C. C. Crews, Stiles 13, 33-21n-16w	65	2380
Davis & Hart, Muslow A-5, 5-20n-15w	30	1505
Hawkins & Stewart, Muslow 1, 31-21n-15w	25	1535
Magnolia, Thigpen 34, 6-20n-15w	115	1546
S. Reele, Herndon 1, 22-21n-15w	25	1613
Stanolind, Dillon 140, 13-21n-15w	235	1613
Caddo Parish (Vivian-Pine Island)—		
Burnham Drlg. Co., Browning B-1, 33-22n-16w	7	2462
De Soto Parish (Wildcat)—		
J. E. Stack et al, Cook 1, 32-13n-14w	5	2858
De Soto Parish (Naborton Bull Bayou)—		
Gulf, Jenkins A-36, 2-12n-12w	*	3687
Grant Parish (Wildcat)—		
Herton Oil Co., McNeely 1, 10-6n-3w	*	5509
La Salle Parish (Wildcats)—		
O. K. Allen, Jr., Louisiana Central 1, 29-9n-3e	*	3500
Frankel et al, Louisiana Central 1, 7-11n-4e	*	3501
J. L. May, La. Delta 1, 20-7n-4e	*	5367
La Salle Parish (Little Creek)—		
H. L. Hunt, Tannehill & Gallagher 5, 31-9n-2e	25	4091
Goodpine F-37, 29-9n-2e	142	2700
Goodpine F-38, 30-9n-2e	127	2720
Placid Oil Co., Tremont A-9, 24-9n-1e	187	2600
H. L. Hunt, Goodpine F-6, 29-9n-1e	*	4283
La Salle Parish (Nebo)—		
H. L. Hunt, Goodpine A-30, 9-7n-3e	108	4102
Goodpine F-60, 10-7n-3e	176	4025
La Salle Parish (Olla)—		
Arkansas Fuel, Tremont C-16, 3-9n-2e	92	2415
Kees F-1, 8-10n-3e	25	2186
Placid Oil Co., La. Central 109	109	2850
La Salle Parish (Urania)—		
Arkansas Fuel Oil Co., Urania Lbr. Co. B-15, 18-10n-2e	33	1516
La Salle Parish (Trout)—		
Margay et al, Pipes 1, 19-8n-3e	*	3454
Morehouse Parish (Monroe)—		
Southern Carbon Co., Tensas Delta 38, 23-22n-4e	¶2	2235
Sabine Parish (Zwolle)—		
Hunter Co., Sabine C-1, 17-7n-13w	*	2554
Tensas Parish (Wildcat)—		
H. L. Hunt, Chicago Mill & Lbr. Co. 5, 1-11n-9e	*	4210
Union Parish (Monroe)—		
N&W Corp., Haile 1, 28-21n-3e	¶9	2185
Thomas 1, 25-20n-3e	¶2	2162
Mississippi		
Madison County (Wildcat)—		
Sinclair-Wyoming, Harris 1, 26-10n-5e	*	6011
Hinds County (Jackson)—		
City of Jackson, Fee 5, 26-6n-1e	¶20	2458
Yazoo County (Tinsley Dome)—		
Amerada, Stutts 5, 36-10n-3w	608	4669
Beckett & Bridwell, Maggie Hart 3, 36-10n-3w	520	5005
Hanley 1, 35-10n-3w	627	4773
Fred Endom, State 1, 16-9n-3w	*	5475
W. L. Etheridge, Stutts 1, 31-10n-2w	600	5028
C. B. Gholson, Sorrells 5, 32-10n-2w	528	5015
Hassie Hunt, Sorrells 6, 31-10n-2w	620	5019
Hunter-Jones, Link 1, 36-9n-3w	*	6034
Kirby Pet. Co., Stutts 5, 30-10n-2w	510	5041
Magnolia, Mitch Payne 6, 35-10n-3w	600	4756
Mitch Payne 7, 35-10n-3w	310	4770
W. G. Ray Drlg. Co., Walker 2, 2-9n-3w	470	4945
Sinclair-Wyoming, Sorrells 5, 29-10n-2w	600	5078
Union, Stevens-Slick 1, 10-11n-3w	780	4734
Montana		
Big Horn County (Soap Creek)—		
Midland Empire Oil Co., Sunray 1, nw nw se 34-6s-32e	*	110
Fallon County (Cedar Creek)—		
Montana-Dakota Development Co., Fee 2, sw sw nw 18-5n-61e	¶½	608
Glacier County (Cut Bank)—		
Consolidated Gas Co., Frary-Tribal 1, ne ne se 24-32n-6w	330	2980
McDonald, Henderson & Overcash, Tribal 2, sw nw nw 29-32n-5w	90	2828
Sanders, Tribal 1, se se se 24-32n-5w	135	3032
Texas Co., Govt. 2-B, se se se 18-32n-5w	160	2730

[*Continued on next page*]

NATIONAL BANK OF TULSA

TULSA, OKLAHOMA

Statement of Condition September 24, 1941

RESOURCES

Cash and Due from Banks	$40,272,352.62	
U. S. Government Securities	14,238,288.05	
Other Bonds and Warrants	3,722,337.62	$58,232,978.29
Loans and Discounts		20,199,664.99
Overdrafts		3,492.65
Income Receivable Accrued		118,824.25
Stock in Federal Reserve Bank		180,000.00
Bank Premises		2,807,499.92
Customers' Liability under Acceptances		4,300.80
TOTAL		$81,546,760.90

LIABILITIES

Deposits		$73,967,995.33
Acceptances Executed		4,300.80
Income Collected Not Earned		94,788.84
Reserve for Taxes, Interest, etc.		94,628.22
Reserve for Preferred Dividends		4,200.00
Capital—Preferred	$ 600,000.00	
Capital—Common	2,700,000.00	
Surplus	2,700,000.00	
Undivided Profits	1,380,847.71	7,380,847.71
TOTAL		$81,546,760.90

The Oil Bank of America

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

United States Well Completions—*Continued*

MONTANA—Continued

Company, Well and Location	Init. Prod. Bbls.	Depth
A. B. Cobb & Co., Tribal 1, se se ne 24-32n-6w	24	3003
Glacier Prod. Co., Bonnet 8, csl nw nw 4-24n-5w	300	2919
Santa Rita O&G Co., Rasmusson 4, csw sw 33-33n-5w	75	2870
Texas Co., Lander 2, c ne se 20-35n-6w	95	3067
M. R. Wagner, TR Tribal 2, se ne ne 13-32n-6w	120	2852
Hill County (Box Elder)—		
Independent Nat. Gas Co., Fee 1007, c sw sw 13-32n-17e	¶9	1283
Toole County (Devon)—		
Frank P. Walsh, Halverson 1, c sw ne 18-33n-2e	¶1.10	788
Toole County (Kevin)—		
Big West Oil Co., State 1, ne ne nw 13-35n-4w	*	2350
Montana-Dakota, Donovan 327, c sw se 31-34n-2w	*	1285
Nepstad-Mongomery-Farger, Haugin 1, sw se 23-35n-3w	272	1645
Enfield Oil Co., Zachor 6, ne se nw 20-35n-1w	120	1581

Michigan

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegan County—		
John Iten Barnard A-1, se nw se 32-1n-14w	*	1302
Clifford Perry, Shafrer 1, nw se nw 18-3n-12w	160	1573
Union Oil Co.'s Johnson 2, nw se se 10-4n-13w	*	1606
Barry County—		
Chapman Oil Co., Woodman 1, nw sw se 12-2n-10w	*	1875
Bay County—		
Gulf, Mudge 1, se nw ne 34-15n-4e	130	2909
Friebe 1, nw se ne 34-15n-4e	160	2853
Basin Oil Co., Swantek 1, e½ ne ne 2-14n-4e	90	2896
United Drillers, Kircher 6, sw se ne 3-14n-4e	325	2901
Clare County—		
Taggart Bros., Ewing 32, c ne 19-20n-6w	¶14	1390
Thomas 28, c ne 28-20n-6w	¶1½	1361
Rowmor & Hughes, Wyman 2, c w½ nw se 29-20n-6w	1000	3761
Kent County—		
Lamar Oil Co., Gravel Co. B2, nw se sw 3-6n-12w	*	1806
Clifford Perry, Plass 1, se se se 22-6n-12w	*	1868
Mecosta County—		
American Prod. Co., Hudson 1, nw se ne 19-15n-9w	*	1192
Osceola County—		
Pure, Richards A1, c s½ sw nw 29-18n-10w	2500	3611
Federal Farm 1, c s½ nw se 31-18n-10w	1000	3620
Gingrich 4, c n½ sw sw 30-18n-10w	4000	2944
Weber Oil Co., Stephens 1, c n½ ne se 31-18n-10w	4000	3574
C. L. Maguire, Williams 1, c n½ sw se 31-18n-10w	800	3624
Turner Pet. Corp., Gas Unit 2, c e½ w½ se 8-18n-7w	*	1570
Van Buren County—		
W. E. Dotson, Holdeman 2, se ne ne 11-1s-14w	200	1287
H. C. William, Kahl 1, ne nw se 11-1s-14w	*	1291
Earl Hartman, Allen 2, sw nw nw 12-1s-14w	70	1292

New Mexico

Company, Well and Location	Init. Prod. Bbls.	Depth
Eddy County—		
V. L. Arnold et al, Arnold 1-A, c ne se 27-17s-30e	336	3227
Emperor Oil Co., Puckett 12-A, c ne sw 24-17s-31e	144	3934
Paton Bros. et al, Magruder 1 se nw se 35-17s-27e	30	456
Repollo Oil Co., Keel 5-A, swc se 7-17s-31e	96	3550
Western Producers Co., Burch 3-C, nw sw se 19-17s-30e	15	3246
Lea County (Jal)—		
Continental et al, Sholes 2-B-25, c nw ne 25-25s-36e (pb 3087)	48	3375
Lea County (Maljamar)—		
Carper Drl. Co., Simon 5-A, c sw sw 29-17s-32e	480	4005
Lea County (Wildcat)—		
Marshall & Uscan Drl. Co., Cunningham 1, swc 22-19s-35e	*	5001
McKinley County—		
Pet. Products Co., Santa Fe 15, sec sw 36-18n-9w	30	1677
State 16, nw sw se 36-18n-9w	68	1663

Nebraska

Company, Well and Location	Init. Prod. Bbls.	Depth
Nemaha County—		
Ellis Bros. et al, Armstrong 1, c w½ ne 10-6n-15e	*	775
Richardson County—		
Ohio, Buholtz 8, c n½ s½ s½ 17-1n-16e	420	2302

New York

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegany County—		
Ebenezer Oil Co., Herrick farm, Bolivar	8	1368
R. B. Moore et al, Painter farm, Bolivar	5	1389
B. & B. Oil Co., Curtis farm, Genesee	13	1447
J. A. Wilber, Wilber farm, Bolivar	8	1445
Messer Oil Corp., Miles farm, Bolivar	13	1529
Ebenezer Oil Co., Emerson farm, Scio	8	1064
Allen farm, Scio	8	1046
Helen Randall, Reid farm, Alma	16	1557
Messer Oil Corp. "M," White farm, Alma	10	1479
The Otsquago Oil Corp., Pike farm, Alma	7	1465
Bradley Bros. Oil Corp., Homestead farm, Bolivar	9	1421
E. J. Phillips et al, Phillips farm, Bolivar	9	1529
Harold Oil Co., Joyce farm, Andover	5	1356
J. E. LeSuer, Sawyer farm, Willing	4	1335
Bliven Hill Oil Co., Norton-McEwen farm, Amity	7	970
Forest Oil Co., Randolph Lot, Wirt	10	1352
Sloan & Zook, Schram farm, Bolivar	9	1422
Water Intake Wells—		
Pure Penn Pet Corp., Christman farm, Bolivar	..	1450
Brothers Oil Co., Crandall farm, Bolivar	..	1378
V. V. V. Franchot, Emerson farm, Scio	..	1329
McEnroe & Randall, Reid farm, Alma	..	1453
Messer Oil Corp. "M," White farm, Alma	..	1539
O. D. Underwood et al, McDivitt farm, Bolivar	..	1348
Marsh Oil Co., Fay farm, Bolivar	..	1438
Coats & Gleason, Updyke farm, Andover	..	1370
L. H. Thornton et al, Cornwell farm, Willing	..	1276
H. W. Batterson et al, Browning farm, Scio	..	881
Hall farm, Scio	..	872

Ohio

Company, Well and Location	Init. Prod. Bbls.	Depth
Ashland County—		
Price et al, Harpster 6	5	679
Ohio Fuel, Sprinkler 1	¶ 1.0	2656
Athens County—		
Ohio Fuel, Tedrow 6	*	1334
Ross, Weimer & Ross, Ackley 10	*	431
Coshocton County—		
Blackburn et al, Crawford 2	¶ 1.5	3063
Rutlege & Mossholder, Hughes 2	¶0.01	3186
Guernsey County—		
James Ronshausen, Keiffer 1	¶0.04	1116
Hocking County—		
Ohio, Fuel, Sunday Creek Coal Co. 203	¶0.86	1136
Holmes County—		
Ohio Fuel, Harold 1	¶0.38	4216
Knox County—		
Ohio Fuel, Whitney 2	¶ 1.5	2949
Knox Exploration, Yearous 1	1	2928
Lawrence County—		
Portage Producers, Cambria Clay Products Co. 17	*	612
Licking County—		
Ohio Fuel, Pigg 1	¶0.37	2589
P. Strum Oil Co., Newlon 2	6	731
James McCloy, Adams 1	2	2364
Loraine County—		
Ohio Fuel, Parks 1	*	2590
Medina County—		
Preston, Grigsby 12K8	5	523
Grigsby L8	5	519
Grigsby L9	5	524
Grigsby 14P8	5	526
Fred C. Shaner et al, Germain 2	70	489
Preston Oil, Clapp D4	5	502
Clapp G5	5	504
Clapp G6	5	496
Meigs County—		
Ohio Fuel, Ward 1	*	1630
Guthrie 1	¶2.07	919
Monroe County—		
Frank Ward, Ketterer 1	1 & ¶0.09	1410
Morgan County—		
Ohio Fuel, Divers 1	*	4355
Texas Gas Utilities, Newton 14	*	4515
Muskingum County—		
Atha Oil Co., Maddon 1	¶0.39	3385
Noble County—		
Harper & Sons, Everly 6	*	635
Felix Gerst, Hupp 2	2	709
Perry County—		
Industrial Gas Corp., Long 1	220	2790
Davis & Hazlett, Tague Heirs 1	*	3310
Preston Oil, Young 1	¶0.50	2800
Summit County—		
Wiser Oil Co., Bachan 1	12 & ¶0.26	2078
Washington County—		
Albert H. John et al, Benson 3	¶0.40	1485
Otto Heldman, Schlarb 3	¶0.22	1180
OLD WELLS DRILLED DEEPER		
Washington County—		
Ohio Fuel, Freoch 3	¶0.02	1890
Monroe County—		
Luburgh Co., Swartz 7 (otd 648)	¶0.08	1060
Swartz 27 (otd 693)	¶0.08	1099
INPUT WELLS		
Medina County—		
Preston, Grigsby LO6	..	535
Grigsby LO7	..	517
Clapp DO5	..	489
Clapp FO4	..	492

Oklahoma

Company, Well and Location	Init. Prod. Bbls.	Depth
Atoka County—		
Campbell, Rich 1, c se se 2-1n-12e	*	619
Caddo County—		
Ramsey, Davis 2, sw c ne ne 1-5n-10w	22	3481
Rocket Drlg., Walden 2, nw c se ne 1-5n-10w	559	3447
Sinclair Prairie, Lewis 1, ne ne sw 2-5n-12w	1048	3342
Carter County—		
J. S. Batson, Moore 1, sw se ne 5-1s-3w	75	2764
W. H. Smith, Ward 9, 110 ft s of sw se se 18-4s-2w	188	2300
Ward 3, se nw ne ne 19-4s-2w	275	2301
Gibson & Jennings, Harrell "S" 12, se c sw nw 20-4s-2w	358	2180
W. F. Merrick, Horton 4, sw c se sw 21-4s-2w	19	2410
Creek County—		
Wilcox O&G, Stephney 2, nw nw nw 35-14n-7e	¶1.5	3160
Devonian, Hamilton 4, ne sw se 32-15n-7e	13	2879
M. Mars et al, Turner 1, ne sw se 16-17n-8e	40	2344
Zephyr Drlg., Emarthlokee 1, ne ne sw 34-17n-8e	21	2380
Klingensmith et al, Cloud 1-A, ne se sw 22-17n-11e	*	2537
Curtis Oil, Ford 2, se c ne ne 9-19n-9e	10	2030
Kiowa County—		
Kelly Wells, Inc., Oster 1, sw ne nw 33-7n-17w	10	1102
McWhirter, Vanderneck 2, nw nw nw 3-7n-19w	*	2350
Love County—		
Batson & Sounders, Conrad 1, ne nw nw 34-6s-2e	20	2703
McClain County—		
Delaney, Bandy 1, nw se sw 13-7n-2w	*	7322
McIntosh County—		
J. Rebold, Trapp 1, 160 ft s of c sw nw 1-12n-16e	¶2.8	2011
Muskogee County—		
J. E. Wallace, Colbert 21, se sw sw ne 14-14n-14e	10	1061
Okfuskee County—		
Seran, Fee 7, ne nw nw 2-11n-8e	*	3618
Titus, Sands 3, sw sw se 26-11n-8e	1200	3447
Sands 4, se sw se 26-11n-8e	360	3434
Foundation, Brown 3, ne nw ne 35-11n-8e	250	3439
Shell Oil, Van Plet 4, se ne nw 35-11n-8e	1506	3457
Phillips Pet., Replogle 3, nw sw nw 26-12n-8e	79	3686
Oklahoma County—		
Barnsdall, Branch 4-A, nw c se sw 23-12n-3w	445	6588
Okmulgee County—		
Schock et al, McKee 3, nw se ne 17-14n-11e	40	2418
Hindow, Inc., Rentie 9, c s l ne nw 13-14n-14e	Input	1075
Osage County—		
Midco Oil, 2-A, se ne se nw 17-25n-11e	*	1837
Pawnee County—		
J. B. Greeves, Armstrong 3-B, sw sw nw 23-20n-7e	Salt Wtr Dspl	2875
Pontotoc County—		
Hughes & Thomas, Johnson 1-A, sw sw se 26-4n-5e	*	1022
Pottawatomie County—		
Sinclair Prairie et al, Cummings 3, sw ne ne 17-7n-4e	240	4205
Eagle et al, School Land 5, nw ne ne 16-7n-5e	*	4280
Amerada, Peters 3, sw sw ne 27-8n-4e	345	3915
Alma, White 1, c w½ nw ne 24-9n-4e	324	4385
Atlantic, Merkle 4, nw nw ne 32-8n-5e	150	4466
Crosbie & Atlantic, School Land 4, nw sw ne 16-9n-4e	504	4692
M. J. Meyers, Johnson 1, ne se ne 34-10n-3e	*	5308

United States Well Completions—*Continued*

Company, Well and Location	Init. Prod. Bbls.	Depth
Seminole County—		
W. Berry et al, Knight 1, ne c nw ne 6-7n-8e	*	40
Mid-Continent, Fish 4, sw ne ne nw 19-7n-8e	40	1490
Atlantic, Wolf 2, c sw ne 30-8n-7e	174	4140
Stephens County—		
Magnolia Pet., Dillard 28, se c nw ne 2-2s-5w	50	695
Geo. Pace, Downey 1, nw ne se 11-3s-6w	*	1851
E. R. Perkins, School Land 1, ne ne nw 16-3s-8w	*	3144
Tulsa County—		
J. L. Reynolds, Bell 4, se sw nw 14-19n-10e	15	1820
OLD WELLS DEEPENED		
Caddo County—		
Magnolia Pet., Surbeck 8, se se se 3-5n-9w (otd 3755) (pb 3805)	35	4039
Carter County—		
W. H. Smith, Ward 8, 120 ft n of se se se 18-4s-2w (otd 2089)	984	2230
Garfield County—		
Champlin Rfg., Rudolph 1, c e½ se ne 23-23n-6w (otd 6316)	20	6927
Stephens County—		
Skelly Oil, Nichols 8, ne c sw sw 36-1s-5w (otd 693)	*	1400

Pennsylvania

Bradford District—		
C. A. Duke estate, D. C. & B.	5	..
George C. Day, Lundy	¼	..
J. A. Bucher et al, Kinley Oil Co.	1	..
Bradford Transit Co., 16 wells	16	..
Forest Oil Corp., 2 wells	2	..
Forest Petroleum Corp., 2 wells	2	..
Niagara Oil Corp., 6 wells	6	..
Esther Oil Co., Lamton	1½	..
Smith, Newton Oil Co., No. 4 Bloomer	1	..
Merry Bros., Burger	1	..
Water Intake Wells—		
Penn Valley Crude Oil No. 2 fee	..	..
Forest Oil Co., 2 wells	..	..
Forest Petroleum Corp., 3 wells	..	..
Niagara Oil Corp., 5 wells	..	..
Milvin-Towne Oil Co., fee	..	..
New York-Penn Gas Field—		
New York State, Natural Gas Co., Glenn H. Boyd	¶	..
Middle District—		
H. M. Amsler, Bissell or Wicks	1	..
Shoup & Vensel, S. Ware	¼	..
Hoffman & Cunningham, H. & L. B. Cross	3	..
Shannor Oil Co., lot 106	1	..
F. F. Spencer, lot 3195	¼	..
E. K. Edie, Tyronville	*	..
Butler-Armstrong District—		
First National Bank of Emlenton, F. E. Robertson	½	..
SOUTHWEST PENNSYLVANIA		
Armstrong County—		
Apollo Gas Co., Baker 2	¶0.07	3511
R. C. Galbraith et al, Rupp 2	¶0.15	1075
Peoples Natural Gas, Snyder 1	¶0.04	2850
Clarion County—		
Frank Shreffler, Henry 2	¶0.02	2751
Fayette County—		
Greensboro, Harris 1	¶0.15	2556
Greene County—		
Bonley & Lough, Boone 1	¶1.21	1483
Vance Heirs 1	¶1.75	1458
Jefferson County—		
T. W. Phillips Gas & Oil Co., Sowers 1	¶0.08	2835
Washington County—		
Equitable Gas, Hewitt Heirs 1	¶0.05	2858
OLD WELLS DRILLED DEEPER		
Green County—		
Peoples Natural Gas Co., Eden 1	¶0.08	3503
Westmoreland County—		
Peoples Natural Gas Co., Ellwood 1	¶0.19	3105

Texas Gulf Coast

Colorado County (West Garwood)—		
W. R. Davis, Brownson 3-A	*	10,424
Fort Bend County (Wildcat)—		
Walter Goldston, Coyle 1	¶	6411
Fort Bend County (Blue Ridge)—		
Wright Drilling, Davidson 1-B	*	4202
Fort Bend County (Clodine)—		
Province, Wing 1-A	128	7542
Fort Bend County (Nash Dome)—		
Atlantic, Groce 1	*	7936
Galveston County (League City)—		
Phillips, Stewart Title 6	*	9311
Hardin County (Sour Lake)—		
J. G. Beard, Watts 1	114	1804
Harris County (Dyersdale)—		
Jack W. Frazier, Dyer 3	292	4080
Roemer & Modglin 1	160	4076
Polk County (Segno)—		
Humble, Kirby 42-Bx	52	8195

Texas Panhandle

Gray County—		
Gulf, Hughey 3-A	77	3195
Kewanee Oil Co., Morse 15-A	101	2596
Skelly, Schafer 133	341	3272
W. H. Taylor 1	400	2981
Sloan O&G Co., Pope 8	215	3291
Taylor Oil Co., Taylor 10-B	54	2933
Texwell Oil Co., Davidson 2	360	3067
Texas Co., Taylor 2-F	972	2910
Hutchinson County—		
J. E. Crosbie, Inc., Pitts 44	407	2900
Danube Oil Corp., Sanford 3-A	36	2790
Stanolind, Moore 6	336	3086
Travelers Oil Co., Haile 15-B	411	3020
Moore County—		
Texoma Natural Gas Co., Kilgore-Gulf 4-G (pb 3439)	¶11.5	3554
Wheeler County—		
Magnolia, Koons 4	105	2466

North Texas

Archer County (Griffin-Kadane)—		
J. E. Kadane, Tr., Griffin 1-G	464	4436
Archer County (Mankins Deep)—		
British-American, Parkey 4	145	4790
Archer County—		
Pet. Producers Co., King 15	96	1253
King 18	40	1244
King 21	90	1256
Richardson 23-D	*	1278
Archer County (Wildcats)—		
Pet. Producers Co., Bloodworth 1	*	1249
White-Duncan et al, King 1	*	1283
Baylor County (Mabelle)—		
British-American O. P. Co., Turbeville 13	*	2521
Clay County (Antelope)—		
Shell, H. Henderson 13	1290	3185
H. Henderson 21 (pb 3191)	231	3588
Clay County—		
Akin-Dimock-Costley, McInnes 11-A	4	262
McInnes 12-A	7	262
L. T. Burns et al, Hamilton 8	62	1145
Geo. Golden et al, 1st. Texas Joint Bank 7-C	85	1137
C. Y. Gorman et al, Taylor 7	40	1135
Taylor 9	33	1130
Geo. W. Graham et al, Hansard 18	39	1300
Hansard 20	70	1166
W. R. Lyons et al, Chapin 2	*	1148
Chapin 3	*	1327
W. H. Metzner-H. B. Wallace, Dallas Joint Bank-Texaco 1 (pb 349)	3	1340
Dallas Joint Bank-Texaco 6	*	369
Stayton Oil Co., McGregor 18	*	1291
McGregor 19	44	1176
McGregor 20	35	1176
Sussex Oil Corp., Hamilton 9	*	225
Clay County (Wildcats)—		
P. C. Burns et al, Taylor 1	*	1332
Clark et al, Perkins 1	*	1315
L. W. Stanford et al, Edrington 1-A	*	470
Cooke County—		
High Point Oil Co., Fette 6	35	1137
Harvey Hudspeth et al, Trubenbach 10-B	8	930
E. W. Mudge, Jr. et al, Fette 5	18	1111
Pet. Producers Co., Andress 11	*	772
Cooke County (Wildcat)—		
H. E. Harrill et al, Cler 1	*	925
Jack County—		
B. F. Collie et al, Rumph 9	4	508
Panhandle Ref. Co., Shown 4-A	720	3038
Ben Rankin & Elliott Prod. Co., Stewart 3-S	*	488
Montague County (Benton-Holmes)—		
Kimbell-Bohner & Ellis, Martin 1 (pb 3540)	84	3753
Montague County—		
Dan Hughes et al, Maddox 1	*	813
Throckmorton County—		
Owenwood Pool No. 3, Housley 13	93	725
Wichita County (K-M-A Ellenberger)—		
Consolidated Oil Co., Ferguson 31-E	3480	4275
Fain-McGaha Oil Corp., Griffin 8-B-E	1080	4390
Tide Water Associated et al, Ferguson 4-E	1696	4340
Wichita County (K-M-A)—		
Hanlon & Buchanan, Inc., Fassett-Tuttle 20-E	200	4123
Fassett-Tuttle 28-G	520	4065
W. T. Waggoner Est., Fee 1-11 (pb 3687)	19	3733
Wichita County—		
Akin-Dimock-Costley, Oates 6-B	40	1301
C. W. Clark et al, Simpson 6	51	1766
Underwood Oil Co., Stine 12	30	1315
Wolfe & Hull, Daume 6	10	698
Wichita County (Wildcat)—		
Bell O&G Co., Powell 41	*	2380
Wilbarger County (Fargo)—		
Amerada, P. Andrew 1	320	4630
Young County—		
Anzac Oil Corp., M. K. Graham 1 (new pay)	85	4479
L. H. Hooker et al, Cullers 1-A	*	570
L. A. Long et al, Garvey 7	5	747
Pemeta Oil Co., Robinson 7-B	4	662
H. B. Street et al, Jacks 5-C	10	564
Worth Oil Co., Wilson 15-B	*	582
Henry Zweifel et al, Martin 1-B	¶ 20	4069
GAS INPUT WELL		
Clay County—		
Akin-Dimock-Costley, McInnes 10-A	..	259
OLD WELL DEEPENED		
Wilbarger County—		
A. E. Blair et al, Scott 1-A (otd 725)	*	886

West Texas

Andrews County (Emma)—		
Texas Co., University 1-J	777	4275
Andrews County (Wildcat)—		
Mascho Oil Co., Fisher 1	*	4610
Crane County (Ella Waddell)—		
Gulf, Waddell 45 (pb 3390)	111	3425
Cochran County (Slaughter)—		
Anderson-Prichard, Woodley 4	599	5045
Atlantic, Boyd-Humble 26	1709	5050
Honolulu Oil Corp., Igoe-Smith 9	1250	5044
Geo. Livermore, Boyd-Texaco 11	593	5080
Boyd-Texaco 19	798	5066
Magnolia, Woodley 12	815	4990
Crockett County (Wildcat)—		
Amerada et al, Todd 1-C (pb 6441)	87	7143
Crockett County (Todd Deep)—		
Amerada et al, Todd 1-B (pb 6105)	85	6300
Crockett County (World-Powell)—		
G. M. Smith et al, Powell 1-D	168	2690
Ector County (Foster)—		
Cities Service, Johnson-ITIO 3-A	234	4212
Forest Dev. Corp., Moss 1-B	*	4372
Moss 1-F	478	4335
Ed J. Kubat et al, Johnson-Texaco 3	706	4140
T. P. Coal & Oil Co., Johnson 4	547	4245
Ector County (Goldsmith)—		
Gulf, Goldsmith 371	990	4268
Goldsmith 372	407	4230
Ector County (North Cowden)—		
Sinclair Prairie, Fay Holt 5	758	4244
Johnson 18-D	986	4142
Snowden-McSweeney Co., Holt-Shell 1	448	4500
Texas Co., Holt 12	1169	4740
Gaines County (Cedar Lake)—		
Stanolind, Raynor 6-A	751	4800
Gaines County (Seminole)—		
Amerada, Matthews 7-A	780	5370
Harry W. Bass et al, Austin 5	551	5244
Magnolia-Atlantic, H. & J. 1-193	130	5221
Gaines County (Wasson)—		
Continental, Wasson 3-B-53	193	4940
Hockley County (Slaughter)—		
Magnolia, Mallet 5-C	1291	5035
Mallet 5-F	1296	5018
Mallet 11-J	1377	5055
Sid Richardson et al, Slaughter 13, lab 59	1509	4995
Texas Co., Cattle Raisers 2	1656	5020
Mallet 13-E	1085	5040
Mallet 14-E	1568	5055
Slaughter 27	1782	5025
Slaughter 32	765	5000
Slaughter 38	1524	5000
Slaughter 39	1341	5000
Tide Water Associated, Lincoln 4	1091	4992
Western States Gaso. Corp., Mallet 9	1253	5041
Howard County—		
Ennisbrook Oil Corp., Texas L&M Co. 23	577	2925
Mitchell County (Northwest)—		
C. L. Echols et al, Crawford 2	224	1712
Pecos County (Abell)—		
Magnolia, Silverman-State 2	1503	5467
Pecos County (Conry-Davis)—		
Stanolind, Conry-Davis 2	254	3984
Pecos County (Taylor-Link)—		
J. D. Lancaster et al, University 1-32	262	1408
Pecos County (White-Baker)—		
Cardinal Oil Co., White-Baker 1-K	113	1963
Tom Green County (Wildcat)—		
B. C. Mann & Cannon Bros., Metcalfe 1	*	530
Ward County—		
Jamison & Pollard, Texas Cotton Ind. 3-B	393	1925
Stanolind, Standard of Texas 1	718	2937
Winkler County (Emperor)—		
Phillips, McCabe 7	74	2948
Winkler County (Keystone)—		
Parker Drl. Co., Ward 2	288	3320
J. R. Sharp et al, Jenkins-Little 4	254	3385
Standard of Texas, Baird 23, sec 19	557	3350
Texas Co., Campbell 5	441	3320
Campbell 7	297	3346
Yoakum County (Wasson)—		
Aloco Oil Co., Knight-Texaco 6	290	5313
Walker-Texaco 11 (pb 5240)	160	5464
Denver P&R Co., Whittenburg 12-A	1188	5182
Drl. & Explor. Co., Hudson-Shell 1-C	420	5104
Randall-Humble 2-A	458	5098
Plymouth Oil Co., Bennett 4-A	331	5260
OLD WELLS DEEPENED		
Crane County (McCamey)—		
W. D. Fugatt et al (was Quality), Hughes 1 (otd 2097)	17	2139
Hughes 2 (otd 2115)	18	2130
Yoakum County (Wasson)—		
Denver P&R Co., Whittenburg 1-A (otd 5084)	821	5168
Whittenburg 2-A (otd 5070)	1093	5172

United States Well Completions—*Continued*

Southwest Texas

CORPUS CHRISTI DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Bee County (Wildcat)—		
McBride & Rowe, Ulke	*	4755
Brooks County (Alta Mesa)—		
Standard of Texas, Garcia 6 (tr 2)	99	2514
Brooks County (Wildcat)—		
Sun, Cage 1	*	8012
Colorado County (Garwood)—		
W. R. Davis, Brownson 3-A	*	10,424
Goliad County (Wildcat)—		
McCormick & King, Spangle 1	*	Loc.
Hidalgo County (Nichols)—		
Baldridge & King, Yturria 3-D	250	3909
Jackson County (Francitas)—		
British American, J. Broughton 3	¶50 & 200	8718
Francitas, J. Broughton 5	¶60 & 200	8160
Jackson County (LaWard)—		
Humble, Robbins 6	500	5236
Jackson County (Lolita)—		
Humble, L. Ranch 19-A	650	6411
Skelly, Mitchell 2-B	450	5306
Jackson County (W. Ganado)—		
Pure, Spacek 6	450	6050
Zetka 1	400	5522
Jackson County (W. Ranch)—		
Magnolia, West 194-A	400	6156
West 196-A	700	6157
Stanolind, L. Ranch 11	550	5510
Jackson County (Wildcats)—		
King & McCormick, Spencer 1	*	5515
Moore & Ahern, Burditt 1, new fld.	750	6513
Jim Wells County (Wade City)—		
San Antonio Pet. Co., Welhausen 3	175	4941
Live Oak County (Wildcat)—		
Joe Stelzig, Everett 1, new fld.	720	1856
Nueces County (Agua Dulce)—		
Howell et al, W. Schulze 5	525	6535
Kilgore Developers, Schulze 2-A	650	6546
Lockhart, Wolters 1	¶70 & 250	6508
Nueces County (Bentonville-King)—		
Southern Minerals, King 21	300	5632
Nueces County (E. Flour Bluff)—		
Humble, Flour Bluff-State 1-L	600	6791
Flour Bluff-State 1-M	¶40	6792
Nueces County (Shield)—		
Phillips, Allen 1	¶60	7010
Refugio County (McFaddin)—		
P. R. Rutherford, Fagan 3-C	250	5641
Refugio County (Refugio)—		
Sunray, Mitchell 2	500	6600
San Patricio County (E. Plymouth)—		
Texon, Tutt 1, outpost	*	7287
San Patricio County (Midway)—		
Cuarta Grande, Gregory Drainage Ditch 1	350	6079

SAN ANTONIO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Bastrop County (Wildcat)—		
J. F. Camp & Sons, Rivers 1	*	1852
Bexar County (Gas Ridge)—		
Leavitt Corning, Jr., A. W. Bitter 3	1½	512
Bitter 2	1½	520
Gas Rridge, Inc., Hamilton & Swain 31	1¼	475
Southwest Dr. Co., Covel 27	1½	478
Bexar County (Wildcat)—		
J. K. Lewis, Schroeder 2	*	1152
Caldwell County (Tenney Creek)—		
Elimag Oil Corp., Connoly 3-C	125	2560
Wiegand Bros., Ellison 2 (2nd hole)	300	2655
Dimmitt County (Wildcat)—		
Roy Mogford, Eardley 1	*	3098
Gonzales County (Wildcat)—		
Texas Co., Hendershot 1	*	4682
Medina County (Chicon Lake)—		
A. A. Murrell, Fee 23	¾	440
C. H. Wagener, Medina 55-A	*	480
Medina 58-A	3	423
Medina 59-A	2	410
Wilson County (Lavernia)—		
Bryan Patterson, Huebinger 1	*	409
Wilson County (Wildcats)—		
Lester Foran, Voges 1	*	1578
W. L. Marshall, Sanders 1	*	1240
C. G. Newton, Hasse 1	*	1500
OLD WELL DEEPENED		
Gonzales County (Wildcat)—		
A. Edmiston, Billings (otd 3507)	*	5235

LAREDO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Duval County (Charamousca)—		
N. V. Duncan, Worden & Drought 25	*	1745
Worden & Drought 3-A	110	1563
Duval County (Chiltipin)—		
Chiltipin Oil Co., Garza 1	¶20	4792
Duval County (Cole)—		
O. W. Killam, R. Lopez 9-A	*	3880
Duval County (E. Benavides)—		
Hiowatha, George Parr 2-A	*	6510
Duval County (Hoffman)—		
Hickok & Reynolds et al, M. Ruiz 1-A	*	2642
Duval County (Piedre Lumbre)—		
Magnolia, Duval 27-203	35	2090
Duval 28-203	¶1.6	2118
Duval County (Tarancahuas)—		
Cox & Hamon, Hoffman-Rosemary 8 (109)	*	2176
Duval County (Wildcat)—		
H. Coquat, Y. Garcia 2	*	6008
F. Gravis, Dinn 1	*	2850
Magnolia, Duval 1 (45)	*	2675
Duval 1 (274)	*	3143
Maley & McGee, Holzapfel 1	*	1229
Jim Hogg County (Colorado)—		
C. Andrade III, Trevino 1-I	600	2853
Humble, King-Colorado 35-B	400	2984
Jim Hogg County (Wildcats)—		
Aehning & Daubert, Gomez 1	*	3015
V. G. Schimmel et al, T. T. East 1	*	3208
Starr County (Rincon)—		
Continental, Slick 105-A	400	4220
Starr County (Wildcat)—		
Sun, Yturria 1, (new field)	¶.35 & 21	4889
T. E. Stephens, H. Gonzales 1	*	307
Webb County (Glen)—		
Holland et al, Bruni 2-B	40	2167
Webb County (Killam)—		
O. W. Killam, Garcia & Villareal 18	66	2075
Webb County (Wildcat)—		
W. C. McBride, Garza 1	*	2410
Zapata County (Escobas)—		
Dulup, Garcia 9-C	9	1047

West Central Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Callahan County (Wildcats)—		
F. E. McCreedy et al, George 1	*	852
R. H. Roark et al, Harris 2	*	376
Coleman County—		
Anzac Oil Corp., Morris 4-A	209	2210
Jones County (Wildcat)—		
S. B. Roberts et al, Cooper 1	*	4935
Jones County—		
Humble, L. L. Huddleston 4	7	3000
J. L. McMahon et al, Akard 2	50	2147
Taylor County (Wildcats)—		
Deep Oil Dev. Co.-U. H. Griggs 1, Higgins 1	‡	2298
B. A. Duffy et al, Abilene Fee 1	*	4368

East Texas

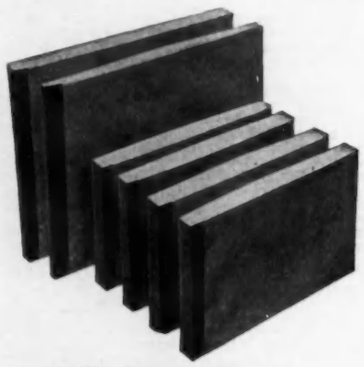
Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Sinclair Prairie, Kinney 75	900	3737
Kilgore Area—		
C. R. Starnes et al, A. Money 1	*	5473
A. Money 50	*	3657
A Money 54	*	3720
Wheelock & Collins, D. Wells 24	750	3632
Longview Area—		
Champlin & Brass, Mattox 5	1500	3623
Monday Oil Co., Watson 8	2500	3660
Selby O&G Co., Snavely 29-A	800	3559
Tide Water, Castleberry 35	2000	3594
Anderson County (Camp Hill)—		
Cecil Stein et al, Southern Pine 2	*	476
Franklin County (Talco)—		
Humble, Dawson 14	276	4325
Freestone County (Wildcat)—		
J. L. Collins & Co., Steward 1	*	4051
Henderson County (Wildcat)—		
J. C. Cook Drl. Co., Smith 1 (40-ac)	*	4891
Limestone County (Wortham)—		
C. L. Brown et al, Boyd 28	10	3009
Rusk County (New Salem)—		
L. O. McMillan et al, Strong-Pool 1-A	*	4124
Wood County (Hawkins)—		
H. H. Groneman et al, Reese 1 (32/100-ac)	508	4801
Humble, Mt. Zion Church 1 (49/100-ac)	452	4825
L. H. Reese 1 (2.68-ac)	463	4833
Roger Lacy et al, M. Snider 1 (20-ac)	397	4798
McDonald & R. Lacy, Sanders 1 (1-ac)	437	4845
C. L. McMahon et al, Pouncey 1 (51⅔-ac)	341	4710
Jim McMurray-Fred Birdsong, Holmes 1	491	4831
Texas Co., Cobb 2 (160-ac)	356	4855

West Virginia

Company, Well and Location	Init. Prod. Bbls.	Depth
Boone County—		
Hope, Federal Coal Co. 8552	¶ 0.1	2450
Braxton County—		
L. D. Nutter, Griffith 3	¶0.05	2310
Cabel County—		
Monicike Gas Co., Alexander Hrs. 2	¶0.12	1685
Calhoun County—		
W. H. Bickel, Bigler 1	¶0.06	2150
Clay County—		
Pittsburgh & West Va., Elk River Coal and Land Co. 7815	¶1.21	1861
Gilmer County—		
Hope, Stump & Boggess 8543	¶0.55	1620
Jackson County—		
Columbian Carbon Co., Putnam 7	¶6.37	5161
Lincoln County—		
Mud River Gas Co., Adkins	¶ 0.8	3710
Ritchie County—		
Phillip M. Lemon, Clayton Heirs 1	*	1895
W. Va. Inv. Co., Parks 25	25	1810
Wayne County—		
Clyde Huffman, Booth 1	¶ .17	2890
OLD WELL DRILLED DEEPER		
Gilmer County—		
Chartiers Oil Co., Huffman 8	*	1766

Wyoming

Company, Well and Location	Init. Prod. Bbls.	Depth
Fremont County (Bison Basin)—		
Bison Bason Oil Co., Kirk 1, c nw sw 17-27n-95w	*	4819
Hot Springs County (Hamilton Dome)—		
Phebus Oil Co., Govt. 3, n sw sw 11-44n-98w	*	648
Natrona County (Cole Creek)—		
General 33-22-P, c nw se nw 22-35n-77w	200	4636
Niobrara County (Lance Creek)—		
Ohio, Rohlff 10, sw ne 32-36n-65w	45	5370
Washakie County (Mahogany Butte)—		
E. W. Sykes, Govt. 1, se se ne 23-43n-89w	*	215
Weston County (Newcastle)—		
J. Dornacher, Kinney-Collins 1, nw nw ne 33-45n-61w	2	626
OLD WELL DEEPENED		
Natrona County (Salt Creek)—		
Stanolind, Light Oil Unit SD-3 21, ne sw nw 35-40n-79w (otd 2340)	250	2804



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WILDCAT REPORT
New Starts and Completions

ARKANSAS
FIRST REPORT

Clark County—Coker Oil Co., Cabe 1, sw sw 25-10s-19w, mat.

COMPLETIONS

Clark County—Coker & Grievas' Williams 2, ne ne 7-11s-19w, abnd 665 ft.

Union County—Delta Drlg. Co.,'s Pickering 1, se nw 32-18s-16w, Tokio 2845 ft, James 3576 ft, Smackover 7856 ft, abnd 7970 ft.

CALIFORNIA
FIRST REPORT

Kern County—J. Pankratz's JPR-Coffee 1, 2-28-28, Round Mountain area, rig.

COMPLETIONS

Kern County—Richfield's West Mountain View 1, 16-30-28, abnd. Northwest Mountain View area, abnd 6655 ft.

Los Angeles County—R. S. Lytle's Anderson 2, 1-3-14, abnd 9504 ft in fault, top Miocene 8200 ft, O'Dea 8790 ft.

NORTH LOUISIANA
FIRST REPORT

Franklin Parish—H. L. Hunt, Chicago Mill 6, c se nw 21-12n-9e, dr.

COMPLETIONS

Catahoula Parish—R. L. Fisher's Bradford 1, sw nw 29-7n-5e, Wilcox 3145 ft, Midway 5771 ft, abnd 5886 ft.

DeSoto Parish—J. E. Stack et al's Cook 1, sw ne 32-13n-14w, pumped 5 bbls 42-gr oil and 50 bbls sw in 24 hours after acidizing 2858 ft.

Grant Parish—Herton Oil Co.'s McNeely 1, sw ne 10-6n-3w, Wilcox 2845 ft, abnd 5509 ft.

LaSalle Parish—O. K. Allen, Jr.'s Louisiana Central 1, nw nw 29-9n-3e, abnd 3500 ft. Frankel et al's Louisiana Central 1, ne sw 7-11n-4e, abnd 3501 ft. J. L. May's Louisiana Delta 1, sw nw 20-7n-4e, Wilcox 2655 ft, Midway 5125 ft, abnd 5367 ft.

Tensas Parish—H. L. Hunt's Chicago-Mill & Lbr Co. 5, ne nw 1-11n-9e, abnd 4210 ft.

SOUTH LOUISIANA
FIRST REPORTS

Calcasieu Parish—Union of California's Gray Est. 1, Moss Lake area, 3000-ac block sec 4-11s-9w, 1½ mi ne Pan American's Louisiana Farms 1, dry hole, lcn.

Rapides Parish—M. H. Marr's Eola Realty 1 South Catahoula Lake area, ne 14-4n-3e, Gilger Drilling Co. contr, lcn.

MICHIGAN
FIRST REPORTS

Kent County—Jetter & DeKraft's Shilton 1, nw nw nw 13-6n-10w, dr.

Montcalm County—R. A. Well's O'Brien 1, sw se ne, 22-11n-5w, dr.

Oceana County—C. W. Teater's Skidmore B-1, se nw se 11-16n-16w, dr.

Osceola County—Sun's Richardson 1, sw sw sw 15-18n-9w, dr.

COMPLETIONS

Allegan County—Clifford Perry's Shafer 1, nw se nw 18-3n-12w, Traverse 1570 ft, td 1573 ft, 30 bbls, after acid 160 bbls, new fld. John Iten's Barnard A-1, se nw se 32-1n-14w, Traverse 1250 ft, abnd 1302 ft.

Barry County—Chapman Oil Co.'s Woodman 1, nw sw se 12-2n-10w, Traverse 1772 ft, abnd 1875 ft.

Mecosta County—American Prod. Co., Hudson 1, nw se ne 19-15n-9w, abnd 1192 ft.

NEW HORIZON IN OLD FIELD

Osceola County—Pure's Gingrich 4, c n½ sw sw 30-18n-10w, Traverse 2899 ft, td 2944 ft, 4000 bbls.

MISSISSIPPI
FIRST REPORTS

Lauderdale County—Pierce Watters' Meeds 1, c w½ sw 26-5n-15e, spd.

Warren County—Magnolia's Hall 1, nw ne 39-17n-4e, mat.

COMPLETIONS

Madison County—Sinclair-Wyoming Oil Co.'s Harris 1, c e½ 26-10n-5e, top Wilcox 1030, ft, Midway 2930 ft, Selma chalk 3650 ft, Eutaw 4701 ft, Tuscaloosa 5205 ft, abnd 6011 ft.

NEW MEXICO
FIRST REPORT

Grant County—Geo. Clayton et al's Gordon 1, ne nw ne 33-14s-18w, lcn.

COMPLETION

Lea County—Marshall & Uscan Drl. Co.'s Cunningham 1, swc 22-19s-35e, top anhydrite 1740 ft, salt series 1853-3170 ft, Yates 3370 ft, abnd 5001 ft.

SOUTHWEST TEXAS
FIRST REPORTS

Bee County—Guy I. Warren's Chesnutt 1, J. Roach sur, 11 mi ne Skidmore, mi 5200-ft test.

Duval County—Adolpho Dovre's Rossen 1, Sur 48, 2 mi se Adami, lcn 1500-ft test.

Live Oak County—C. G. Newton's Schulle 1, S. B. Eves sur 186, 3 mi se Fashing, mi 3000-ft test.

San Patricio County—Fred W. Shield's Clemons 1, I&GN, ab 174, nw Mathis, ru 4900-ft test.

Starr County—Magnolia's Hinojosa 1, Por 110, 2 mi sw Viboras dr water well for 3300-ft test. Sun's Chapotal Lnd. Co. 5, Por 99, 1 mi nw Yturria disc, mi 4500-ft test.

Williamson County—G. C. Richardson's Kenedy 1, S. Williams sur, 2 mi ne Thrall, dr 150 ft on 1100-ft contract.

COMPLETIONS

Bastrop County—J. F. Camp & Sons' Rivers 1, Standifer sur, 3 mi sw Elgin, abnd 1852 ft.

Bexar County—J. K. Lewis' F. Schroeder 2, Bust sur 37, e San Antonio, abnd 1152 ft.

Bee County—W. C. McBride & W. E. Rowe's Ulke 1, Williams sur, 4 mi w Skidmore, abnd 4755 ft.

Brooks County—Sun Oil Co.'s J. D. Cage 1, Sur 141, sw Falfurrias, abnd 8012 ft.

Dennitt County—R. R. Mogford's Eardley 1, Sanches sur, 1 mi sw Carrizo Spgs, temp abnd 2560 ft with fsg job, reworked, abnd 3098 ft.

Duval County—Henderson Coquat's Y. Garcia 1, Hinojosa Gr, 3 mi s Realitos, abnd 6008 ft. F. Gravis' Dinn 1, Sur 2, 8 mi ne Bruni.

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abnd 2850 ft, Magnolia's DCRC 1, Sec 45, 8 mi sw Freer, abnd 2675 ft; DCRC 1, Sec 274, 9 mi nw Freer, abnd 3143 ft, Maley & McGee's Holzapfel 1, Sec 42, 22 mi nw Freer, abnd 1229 ft.

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PRIORITY FORMS

PD-25C PD-73
PD-25D PD-83A

IN STOCK AND AVAILABLE FOR IMMEDIATE SHIPMENT

Form PC-25C (revised) is provided as a replacement of the original Affidavit PD-25C. It is for use by those who give to their suppliers a monthly statement of the percentage of the previous month's dollar volume which was for Defense, as defined in the Defense Supplies Rating Plan.

Form PC-25D is provided as a replacement for those who have been using the affidavit as identification for **individual purchases** and who have shown thereon the number of the Order or Certificate assigned a preference rating under which the material covered by that individual order was to be used. For your convenience the new form is a **Customer's Certificate of Defense Requirements** instead of an **Affidavit.**

Form PD-73 pertains to the shipment of steel under Preference Order No. M-21.

Form PD-83A pertains to deliveries of steel from warehouse stock during first quarter of 1941.

★

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Goliad County — McCormick & King's Spangle 1, Kidd sur, 4½ mi n Goliad, abnd lcn, will drill another.

Gonzales County—A. Edmiston's Billings 1, Hammons 1/3 Lge, 9 mi s Smiley, orig abnd by Midland and Sorrell at 3507 ft, abnd 5235 ft. Texas Co.'s Hendershot 1, Doyle sur, 2 mi w Harwood, abnd 4682 ft.

Jackson County—King & McCormick's I. F. Spencer 1, Williams sur, 6 mi n Ganado, abnd 5515 ft. Moore & Ahern et al's Birditt 1, tr 10, Woolfolk sub, 3½ mi nw LaWard, comp 122.8 bpd ⅛-in ch 600 lbs tp, 660 lbs cp 25.8-gr, perf 5207-26 ft, td 6514 ft, opens new fld.

Jim Hogg County—Achning & Daubert's Gomez 1, sur 105, 15 mi s Petroleum, abnd 3015 ft. V. G. Schimmel's T. T. East 1, Randado Gr, 6 mi s Randado, abnd 3208 ft.

Live Oak County—Joe Stelzig et al's Everett 1, lot 3408, blk 72, Simmons sub, 7 mi sw Simmons City, comp 23 bpd 20 gr o, 1-in ch, 45 lbs tp, 420 lbs cp, perf 1844-53 ft with 60 shots, td 1856 ft, opens new fld.

San Patricio County—Texon Dr. Co.'s Turr 1, blk 1, sec 26, near East Plymouth fld, abnd 7278 ft.

Starr County—T. E. Stephens' Gonzales 1, sh 62, por 71, 12 mi nw Roma, abnd 307 ft. Sun's Yturria 1, Por 100, 16 mi e Rio Grande city, comp 21 bpd 44.2-gr oil plus 1½ bpd w 7/64-in ch 1200 lbs tp, 1550 lbs cp, perf 4232-33 ft gor 17, 481/1, td 4889 ft, opens new fld.

Webb County—W. C. McBride's P. de la Garza, sec 675, 8 mi n Bruni, abnd 2410 ft.

Wilson County—Lestern Foran et al's M. Vogas 1, Manchaca Gr, 2½ mi sw Poth, abnd 1578 ft. W. L. Marshall's Sanders 1, Herrera gr, 1 mi nw Lavernia, abnd 1240 ft. C. G. Newton's Hasse 1, Salinas sur, 14 mi sw Floresville, abnd 1500 ft.

WEST TEXAS

FIRST REPORTS

Andrews County—Fullerton Oil Co.'s Wilson 1, ne sw se PSL sec 15, blk A-32, lcn 8000-ft test.

Crockett County—Moore Bros. et al's Childress-Halff 1, 1401 ft from m/e/e and 467 ft from m/n/s line s½ sec 71½, blk GG, John Oney sur, lcn.

Irion County—B. C. Mann & Cannon Bros.' Reed 1, c ne ne H&TC sec 2, blk 17, machine.

Lubbock County—L. C. Harrison-Tobe Foster's Steck 1, se se se sec 7, blk A, J. H. Gibson sur, rig.

Pecos County—Gulf & L. H. Wentz's Millar 2, c nw se H&GN sec 43, blk 12, rig.

Terry County—American Drl. Corp. et al's Hufnail 1, se se se C&M sec 14, blk D-14, rig.

Val Verde County—John Cockburn-Parsons-Cleveland's Ingram 1, 1980 ft from n and 330 ft from w lines of m/w/nw 80 acres GC&SF sec 42, blk LLL, dr 910 ft.

COMPLETIONS

Andrews County—Mascho Oil Co.'s Fisher 1, c ne se PSL sec 16, blk A-36, elev 3162 ft, Cowden anhydrite 2590 ft, base salt 2735 ft, Yates 2835 ft, brown lime 3905 ft, San Andres lime 4083 ft, abnd 4602 ft.

Crockett County—Amerada et al's Todd 1-C, c sw sw GC&SF sec 15, blk 10, 3½ mi w Todd deep, elev 2430 ft, top Crinoidal 6436 ft, Simpson 6645 ft, Ellenberger 6975 ft, td 7143 ft, pb and perforated 30 shots 6431-41 ft (Crinoidal), flowed 87 bbls oil and 219 bbls water initial ¼-in ch.

Tom Green County—B. C. Mann & Cannon's Metcalfe 1, nwc Wilhelm Woehler sur 672, abnd 530 ft.

NORTH TEXAS

FIRST REPORTS

Baylor County—Tom F. Hunter et al's Roberts County School Lands 1, c sw 40-ac sec 9, Stayton & Bunch subdiv, lcn.

Haskell County—Joe A. Worsham et al's McLennan 1, swc 370-ac tr, S. C. Robertson sur 40, A-352, mim for 3500-ft test.

Knox County—Seitz-Comegys & Seitz's Haskins 1, nwc e½ BBB&C sec 216, blk A, sp.

Montague County—Youngblood-Foree-Stogner & R. H. Dearing's Meador 1, south corner J. B. Miller A-461, lcn.

COMPLETIONS

Archer County — Petroleum Prod. Co.'s Bloodworth 1, BBB&C sec 12, A-936, abnd 1249 ft. White & Duncan's King 1, sec 8, J. Scott sur, abnd 1283 ft.

Clay County—P. C. Burns et al's Taylor 1, blk 73, Byers subdiv, abnd 1332 ft. Clark et al's Perkins 1, blk 80, Byers subdiv, abnd 1315 ft. L. W. Stanford et al's Edrington 1-A, F. W. Grassmeyer sur, A-694, abnd 470 ft.

Cooke County—H. E. Harvill et al's Cler 1, m/n se cor 80-ac tr, Henry Dixon sur A-335, abnd 925 ft.

Wichita County—Bell O&G Co.'s Powell 41, 550 ft from e and 1300 ft from s lines C. Winters sur A-322, se Burk, elev 1026 ft, top Canyon 1686 ft, Ellenberger 2330 ft, abnd 2380 ft.

Young County—Anzac Oil Corp.'s M. K. Graham et al 1, near c w½ of w½ A. E. Gassett sur A-1802, new and deeper pay, top Bend 3400 ft, Mississippian 4421 ft, broken pay 4432-79 ft, used 6200 gals acid, pumped 85 bbls initial.

EAST TEXAS

FIRST REPORTS

Delta County—Talco Asphalt & Ref. Co.'s W. T. Peck 1, nwc Wm. Ewing sur, 1 mi e Horton, mim.

Hunt County—Ed V. & J. D. Parsons et al's England 1, 330 ft from n and c e & w lines 20-ac lse, Willard Marler sur, south part Commerce townsite, lcn.

COMPLETIONS

Freestone County—J. L. Collins & Co.'s Steward 1, 1400 ft from w and 500 ft from n lines 100-ac lse, Jas. James sur, Pecan chalg 2323-2422 ft, Austin chalk 3267-3622 ft, top Woodbine series 3982 ft, trace gas 3982-87 ft and 3994-98 ft, trace oil 4000-05 ft, water 4005-4051 ft, abnd.

Henderson County—J. C. Cook Drl. Co.'s Smith 1, se part 40-ac lse, M. T. Equis sur, top Pecan chalk 3142 ft, Austin chalk 4283-4558 ft, Woodbine series 4818 ft, abnd 4891 ft.

WEST CENTRAL TEXAS

FIRST REPORTS

Callahan County — Wm. D. Austin et al's Jackson 1-A, c sw ne E. T. Ry. sec 20, lcn. F. E. McCreedy et al's George 2, sw nw nw BOA sec 72, lcn.

Hamilton County — Grady Wallace et al's Robertson 1, 4250 ft from ne and 6400 ft from se lines John Chew sur A-164, lcn 4000-ft test.

Jones County — J. B. Cunningham et al's Freeman 1, nwc 160-ac tr, Alex Glenn sur no. 264, lcn. Ungren-Frazier et al's Payton 1, se part 100-ac tr, S. M. Hale sur no. 251, lcn.

COMPLETIONS

Callahan County — F. E. McCreedy et al's George 1, se ne ne BOA sec 71, abnd 852 ft. R. H. Roark et al's Harris 2, nw part Geo. Click sur no. 771, abnd 376 ft.

Jones County — S. B. Roberts et al's Cooper 1, sec sw T&P sec 29, blk 15, elv 1696 ft, top Swastika 2323 ft, Bend 4819 ft, abnd 4935 ft.

Taylor County—Deeo Oil Dev. Co. & Griggs' Higgins 1, nec lot 8, sec 3, D. B. Corley sur, elev 1733 ft, jkd and abnd 2298 ft. B. A. Duffy et al's Abilene Fee 1, 3600 ft from n and 430 ft from w lines S. Andrews sur no 117, elev 2035 ft, abnd 4368 ft.

TEXAS GULF COAST

FIRST REPORTS

Brazoria County—H. A. Potter & C. L. Archer's McDonald 1, 2½ mi e of Pearland, Warren D. C. Hall sur, 424 ft sw & 513 ft se of most n cor of lot 66, G. W. Jenkins sub, PD 9000 ft, Wynne Crosby Drilling Co., cont, mim.

H. E. Hamilton's J. M. Smith Est. 1, southeast Lochridge field, 7000 ft test, Morris Hamilton Drilling Co. Cont, preparing to spud.

Polk County—Pan American's Goodrich Community 1, Goodrich area, 3120 ft n & 60 deg e along nw line Augustin Viesca sur from sw cor of Isaac Parker sur, thence 1515 ft se'ly at right angles. Location 1 mi ne Pan American's Texas Long Leaf 1, Heyser, Heard & Clardy Contrs, preparing to spud.

COMPLETIONS

Fort Bend County—W. L. Goldston's Coyle 1, 2 mi s Needville, top pay 5165-80 ft, completed as gasser, no gauge, tp 1025, cp 1025, perf 5176-80 ft, gas sands: 4984-90 ft, 5015-38 ft, 5165-80 ft.

Fort Bend County—Atlantic's Groce 1, ne flank dome on 497-ac lease, T. Alsberry sur, abnd 7936 ft.

WYOMING

FIRST REPORTS

Carbon County—Ohio's Union Pacific 1, ne ne 33-20n-81w, Elk Mountain structure, elevation 7953 ft, objective Sundance 4000 ft, dr 820 ft. Continental's Johnson-Government 1, se se sw 1-24n-88w, O'Brien Springs, low closure fold, objective Tensleep 5300 ft, dr 500 ft.

"Thunder in the Earth"

By Edwin Lanham; Harcourt, Brace and Company; $2.75.

A mushroom town that sprang up in the era of the greatest oil discovery in the world is the scene of Edwin Lanham's novel about the petroleum industry, "Thunder in the Earth."

The book pictures Texas in the 1930's going through the turbulent climax of the last of the reckless and unprincipled oil towns. Cobb Walters, drunk with luck and life, symbolizes the new story of oil. The blind and terrible compulsions which drive Walters through his emotional and business life are set down with understanding. Lanham gives the whole physical and spiritual wreckage and triumph of a town, a Texas town victimized and energized by the magic impetus of oil.

Lanham, born at Weatherford, Texas, wrote the novel under a Guggenheim grant.

MEN IN THE INDUSTRY'S NEWS

CARLETON D. SPEED, JR., consulting geologist, was elected president of the Houston geological Society, October 2, succeeding George Buchanan. Donald Davis, The Pure Oil Company, was elected vice president; Wayne Burkhead, Union Oil Company, secretary; James Kisling, Jr., Amerada Petroleum Corporation, treasurer. New advisory committee members are Hershal Ferguson, Carl Richardson, Barnsdall Oil Company; M. H. Steig, Phillips Petroleum Company.

Speed began his career at 17 during school vacations at Ranger. He was graduated from Texas A. & M. College and later studied geology and paleontology at University of Chicago. He was employed in 1929 in the geological department of Gypsy Oil Company in Oklahoma and Kansas for two years. Later he worked independently, assembling blocks and drilling wildcats. He opened Speed Oil Company in Houston in 1936.

The society's October 9 meeting will be held at Beaumont in conjunction with Texas Oil and Gas Association ceremonies dedicating a monument on the site of the Lucas gusher.

RICHARD M. GOODING, petroleum engineer for the Tide Water Associated Oil Company-Seaboard Oil Company partnership in the Palestine, Texas, district, has resigned to join the United States Bureau of Mines staff at Bartlesville.

JOHN E. FARRELL, producer and drilling contractor, is chairman of a committee of Fort Worth oil men who will honor the members of the Interstate Oil Compact with a dinner and party at a Fort Worth country club October 16. Invitations have been extended to numerous prominent oil men. Other members of the committee are F. J. Adams, W. A. Moncrief, R. A. Brewer and Raymond Gee.

ROY E. BUSH, Pittsburgh Equitable Meter Company, has been elected president of the Technical Club of Oklahoma. Other officers are David B. Hawthorne, Amerada Petroleum Corporation, vice president; Charles Luckfield, Stanolind Oil & Gas Company, secretary-treasurer. John R. Evans, chief engineer of Stanolind Oil & Gas Company, Tulsa, was president last year.

STUART K. CLARK, assistant chief geologist for Continental Oil Company, discussed "Wider Well Spacing—Panacea or Delusion" at the monthly meeting of the South Texas Geological Society at San Antonio on October 3.

A. S. PARKS and J. A. Tennant of Houston discussed "Mechanics of Plant Installation in Gas and Distillate Fields" at a meeting of the Gulf Coast Oil Scouts and Landmen's Association October 3. J. E. Turner, Continental Oil Company, is association president.

W. J. MURRAY, JR., has resigned as chief enforcement officer of the Oil and gas division of the Texas Railroad Commission, to take a post in the new federal set-up as an assistant to E. DeGolyer. Murray will work in District 3. He is a graduate petroleum engineer, University of Texas, 1936. He worked as consulting engineer until 1939, when he joined the commission staff in East Texas. During his earlier years he had oil field experience as tool dresser, driller, and tool pusher in several West Texas fields.

GEORGE L. NOBLE, JR., Houston, last week was appointed to the recently created district priorities division of the OPM, Houston. The office will assist prospective builders of plants in securing needed materials, thus streamlining the operation which ordinarily requires the builder to write or go to Washington to secure priorities. It was explained that the Houston office will not have authority to pass on priorities, but will present the manufacturer's problem to proper authorities in Washington, thus saving the manufacturer much trouble. Noble has been engaged in the oil business for 18 years. He was secretary-treasurer of the Houston Production Company for 15 years. For the past 3 years he served as vice president and production manager of Western Gulf Petroleum Company.

E. O. BUCK, of Houston, assistant director of production, District 3, office of Petroleum Coordinator, addressed the Shreveport Geological Society October 3 on functions of the coordinator's office. The meeting was attended by oil and supply men as well as geologists.

E. H. PARKER, Oklahoma Natural Gas Company, spoke before Engineers Club of Tulsa at last week's meeting on the subject "Some Fundamentals of Internal-Combustion-Engine Design."

H. R. STRAIGHT, president of Cities Service Oil Company, was honored at Bartlesville, September 30, on occasion of his 67th birthday. Straight, president of the company since 1937, was born in the heart of the Pennsylvania oil fields, attended local schools, and graduated from Leland Stanford in 1897 as an honor student. His connection with H. L. Doherty interests began in 1912.

H. F. BEARDMORE, engineer with Amerada, Petroleum Corporation, Tulsa, spoke before the Seminole chapter of API on "Use of Gas Anchors in Pumping Wells in the Greater Seminole Area."

LATEN STANBERRY, former chief supervisor of oil and gas for the Texas Railroad Commission, has been named mineral inspector for the State School Land Board. He will work under Land Commissioner Bascom Giles in the post from which Gaddis Bass recently resigned. Stanberry joined the Texas Railroad Commission's oil and gas staff the year it was organized, 1919. He worked with the commission until 1926, at which time he became drilling superintendent for the Moody-Seagraves interests. For the next three years he supervised the drilling operations of this company in Louisiana and Texas. He returned to the commission as assistant director of the gas utilities division, and in 1931 he became director. In 1934 he was appointed chief supervisor of oil and gas and remained in that post until 1938, when he re-entered the oil business. Much of his new work will involve leases of state school lands and their administration.

H. C. OTIS, president of Otis Pressure Control, Inc., has been elected president of the Dallas Petroleum Engineers Club, to fill the unexpired term of R. H. McLemore, Sun Oil Company engineer who was recently called into service as a captain in the Army at Camp Logan, Colorado. . . . John Fuller of Oil Well Supply Company was named executive vice president, succeeding S. S. Parker of National Tank Company, who resigned. The club resumed its weekly luncheon meetings September 29, with Allen Guiberson, vice president of Guiberson Diesel Engine Company, delivering a talk on the company's new plant near Garland, Texas.

JAMES TANHAM, assistant to President W. S. S. Rodgers of The Texas Corporation and The Texas Company, has been elected a vice president of both companies. Torrey H. Webb, vice president and general manager of The Texas Company (California), was named a vice president of The Texas Corporation. Tanham joined The Texas Company in May, 1919. Webb joined California Petroleum Corporation in 1926 which became The Texas Company (California) in 1928.

ROBERT W. McILVAIN JR., first lieutenant in the 124th Cavalry, 56th Brigade, National Guard, has resumed his duties as manager of the Fort Worth division of The Pure Oil Company after being in military service since last November. During his absence, Chase E. Sutton, Houston division manager, divided his time between the two positions.

CHARLES A. MILLER, safety director and assistant to the personnel department manager, The Texas Company, Houston, will preside over petroleum section meetings of the National Safety Congress, Chicago, October 6-10.

MEN IN THE INDUSTRY'S NEWS

LOUIS B. NEUMILLER, who joined Caterpillar Tractor Company of Peoria, Illinois 26 years ago as a stenographer and blue-print clerk in the engineering department, has been elected president. He succeeds B. C. Heacock, president since 1930, who becomes chairman of the executive committee.

The new president is a native Peorian, educated in his city's schools. From the engineering department at "Caterpillar," in 1918 Neumiller moved, on a four-months leave of absence, to a position in the United States ordnance engineering department at Alliance, Ohio. Upon returning to Peoria he went into the factory to work on assembly lines.

From the assembly lines he went to the engineering department where he became drafting room supervisor. In 1922 he was named parts manager. Simultaneous with the advent of "Caterpillar" diesel engines in 1931, Neumiller was advanced to general service manager. He became sales manager for the central division in 1937, director of industrial relations six months later, and was appointed a vice president five months after that. As vice president, a position he held until elevation to the presidency, he was in charge of the service, parts, industrial relations and training and public relations departments.

Heacock succeeds R. C. Force, who resigned as committee head, but remains a member of the board. Heacock will have headquarters in Peoria, although at present his time and attention are occupied in Washington, where he went last spring on leave of absence to serve as special assistant to Under-Secretary of War Robert Patterson.

STEFAN VON CROY, chief geophysicist for Barnsdall Oil Company, Houston, has been transferred to Tulsa office.

E. W. MARLAND, former governor of Oklahoma and founder of Marland Oil Company, died at his home in Ponca City, October 3. He was 67 years old and had been in ill health for more than a year.

Marland was born in Pittsburgh and entered the oil business after graduation from the University of Michigan in law. His first work in the oil industry was with J. M. Guffey and he built up substantial holdings, which were lost in 1907. Shortly afterward he came to Oklahoma and was instrumental in discovery of the Ponca field, around which Marland Oil Company and its subsidiaries were built. Control of the company passed to the banking firm of J. P. Morgan and Company and it became a part of Continental Oil Company. Marland then entered the political field, serving first as congressman from Oklahoma and then as governor. He was defeated three years ago for United States Senator. Since then he had lived in retirement on his estate near Ponca City.

GOODWIN JOHNSTON who recently was appointed coordinator of oil field sales for Macwhyte Company manufacturers of wire rope, of Kenosha, Wisconsin. Johnston has been in sales work for Macwhyte Company for some time, specializing throughout the oil fields for a number of years and until just recently was Macwhyte's representative in Texas, from which position he was drawn to coordinate activity in oil fields.

R. B. ANDERSON, general counsel for the W. T. Waggoner estate, owner of extensive ranch and oil producing properties and a refinery in North Texas, has been placed in charge of its general office at Vernon, Texas. Active management of the estate has been assumed by Guy L. and E. Paul Waggoner and A. B. Wharton Jr., sons and grandson, respectively, of the late W. T. Waggoner. These changes resulted from the recent death of R. L. More, general manager for decades.

GERALD R. KING, president, and Neal Taylor of the Petroleum Engineering Club, student affiliate of the American Institute of Mining Engineers at Texas A. & M. College, have been elected to represent the club at the A.I.M.E. meeting (Petroleum Division) at Dallas, October 16-18. The club meeting, held September 29, was the first of the school year.

WALLACE W. LOCKWOOD has been appointed advertising manager of Taylor Instrument Companies, Rochester, N. Y., replacing Elmer E. Way, resigned. A graduate of Syracuse University, Lockwood joined the Taylor advertising department in 1932 and was made assistant advertising manager in 1939. He previously was connected with Lapp Insulator Company, Leroy, N. Y., the Z. L. Potter Advertising Agency and the David Tynion Advertising Agency, both of Syracuse.

PAUL RAIGORODSKY, Tulsa, engineer, has just been appointed assistant director of production in natural gas division of Office of Petroleum Coordinator.

R. P. PHILLIPS of Jennings, La., has formed a well-servicing company. He formerly was with Stanolind Oil & Gas Company and O. W. Dyer Drilling Company.

G. H. WESTBY, president of Seismograph Service, Inc., Tulsa, is a glider enthusiast and is an active member of a newly formed local club.

J. C. STRAUS, 64, retired North Texas operator and formerly North Texas superintendent for Gulf Oil Corporation, died October 1 at Wichita Falls, where he had resided for two decades.

HARRY COLLINS POTTS, vice president of Kerotest Manufacturing Company, Pittsburgh, died suddenly in Washington, D. C., Monday, September 30. He had been identified with Kerotest since 1918, and was known in practically every active oil field in the world. He had gone to Washington to witness the launching of the Liberty ships last Saturday, when he became suddenly ill and passed away 48 hours later. Potts was born in Columbus, Ohio, in 1870. Burial was in Columbus.

M. T. HALBOUTY, Houston geologist and petroleum engineer, addressed Texas A. & M. College petroleum engineering and geological students September 29. He spoke on "Geology, Economic Significance and Methods of Drilling New Flank Production on Old Salt Domes in Texas and Louisiana Gulf Coasts."

RUSSELL B. DAY, Southwest district manager of Wico Electric Company, will be transferred November 1 to Springfield, Massachusetts, to become assistant manager of manufacturing sales. R. W. Wilbur, now assistant service manager, will become district manager.

FRANK PHILLIPS, chairman and chief executive officer of Phillips Petroleum Company, will become a legal resident of Oklahoma, January 1, 1942. For many years the Bartlesville oil man has been a legal resident of New York.

A.P.I. President Dies At Home in New York

Axtell Julius Byles, president of the American Petroleum Institute, New York, died at his home at Ardsley-on-the Hudson, New York, the morning of September 28, after an illness of several months. He was 60 years old.

Prior to his election in 1933 to the presidency of the country's largest national trade association representing the petroleum industry, Byles had been president of Tide Water Associated Oil Company, New York, and chairman of the board of its affiliated company, Associated Oil Company, San Francisco.

Byles was born at Titusville, Pennsylvania, October 21, 1880, the son of Julius and Mary Axtell Byles. Educated in the Titusville public schools, he prepared for college at Lawrenceville School, and in 1903 was graduated by Princeton University with the degree of Bachelor of Science. He completed his formal education with two years' study of law, and in 1905 was admitted to the Pennsylvania bar. He then returned to Titusville, where he practiced law until 1917.

Titusville is the site of the 1859 Drake well, the first well in the United States drilled purposely to find oil, and much of the important Pennsylvania oil in-

A.P.I. President Dies

AXTELL J. BYLES

dustry which had its inception in that well has from the beginning centered in Titusville. Naturally in his youth Byles, in common with the other residents of Titusville, was intensely interested in the oil business, the region's major enterprise. When he returned home to practice law, many of his most important cases were connected with oil, and he there got the special training which directed his activities in later years.

In September, 1917, Byles was appointed general counsel of Tide Water Oil Company, New York, a company which had its roots in the Titusville region. He rapidly rose to hold many executive responsibilities in the company and its affiliates. He was elected to its board of directors in May, 1919, became vice president in May, 1922, and president in February, 1924. Two years later, in 1926, he was elected president and director of Tide Water Associated Oil Company, New York, and president and director of Associated Oil Company, San Francisco. In 1927 he became chairman of the board of directors of the latter company.

Heads Institute Since 1933

These positions he held until May, 1933, when he resigned to become president of the American Petroleum Institute. Annually since 1933 he has been re-elected to the Institute's highest office, and to its board of directors.

He was a member of the Adirondack League Club, Princeton Club of New York, Sleepy Hollow Country Club, Manursing Island Club, Cap and Gown (Princeton), Metropolitan Club, and Olympic Club, San Francisco.

Byles married Florence Payne on September 6, 1905, and is survived by her and by their two sons, Axtell Byles Jr., of Mt. Carmel, Illinois, and Lieutenant Julius Byles of the 178th Field Artillery.

We like the general approval of Raybestos-Manhattan packings, but the applause we appreciate most comes from the men who know—the boys who are responsible for clean, smooth, economical shop performance. They specified R/M packings in the first place because it was the best known name in asbestos, with 40 years' experience in industrial control. But they specify it now—and recommend it today on pure performance. They know that R/M packings are the complete line (without duplicates) that has smoother control, needs less attention, and holds wear to the absolute minimum. Join them. Let R/M packings whip your power into line. You'll find it pays.

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Squeaks from the Bull Wheel

He Had It

A man had a cello with one string over which he drew the bow for hours at a time, holding his finger in one place. His wife endured this noise for seven months. One night she said quietly, "I have observed that when others play that magnificent instrument, there are four strings over which to draw the bow, and the players move their fingers about continuously." The man stopped playing a moment, looked at his wife wisely, shook his head and said: "Of course the others have four strings and move their fingers about constantly. They are looking for the place. I've found it."

Caution

"Can I trust you?"

"What?"

"Can I trust you?"

"Why certainly, all little girls can trust policemen."

"All right, then, please button my panties."

In the Raw

As a motorist drove by a military hospital a nude soldier dashed toward the highway. His clothing was gone but he retained his glasses. Pursuing him closely was a female nurse brandishing a pair of long shears. Behind these two raced a doctor.

"No, no, nurse," yelled the doctor, "I said 'slip off his spectacles.' "

Fine Distinction

What's the difference between the blueplate special and the whiteplate special?

The whiteplate special is five cents more.

Is the food better on the whiteplate special?

No; but we have to wash them.

No Patches

"Why don't you get that hole mended?"

"Faith," replied Pat, "not Oi. A hole may be the result iv an accident, but sure a patch is a sartin sign of poverty."

No Foolin'!

"Congratulations, old man, your wife has presented you with quadruplets."

"Honest, Doc? Four crying out loud!"

Tact

"John," said the young mother, I've decided on a name for the baby. We will call her Imogen."

John was lost in thought for a few minutes. He did not like the name.

"That's nice," he said presently. "My first sweetheart was named Imogen, and she'll take it as a compliment."

"We will call her Mary, after my mother."

Only Opportunity

"My, my, but you look prosperous! How do you manage it?"

"Oh, I'm a busy man," replied the musician. "Besides playing in the orchestra, I play in a quartet, give lessons, and perform on the radio."

"When do you sleep?"

"During rehearsals."

Irrefutable

"That wrestler doesn't look it, but he's as strong as a horse."

"Can you imagine that."

"That's not imagination, that's my sense of smell."

Wash Day

A mother, discovering her small daughter washing the kitten with soap and water, exclaimed:

"Oh, Betty, darling, I don't think the mother pussy would like her kitty washed like that."

"But, mother, I really can't lick it."

Durable Child

"Yes, he is a year old now, and he has been walking since he was eight months old."

"Really? He must be awfully tired."

It Depends

"How old now would be a person born in 1894?"

"Man or woman?"

Father Goose

Mary had a little lamb;
His hair was white as heck,
And everywhere that Mary went
The poor sap signed the check.

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Wherever a rig is set up, wherever the field . . . there you'll find drilling crews pinning their faith on Plymouth Oil Field Cordage.

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2. Full-Port Lubricant Sealing Grooves.
3. Wedge-Proof cylindrical Super-Surfaced Core.
4. Sealing Grooves on Plug never pass Ports.

eading drilling contractors and major oil companies have proven by actual ompetitive field tests that in all types of service Mission Plug Valves outwear and utlast other plug valves. • *If you want to reduce plug valve problems — and save money — make your next plug valve a Mission.*

1. **AUTOMATIC LUBRICATION**—Provides a constant lubricant seal • Line pressure automatically forces lubricant from reservoirs to sealing grooves • Eliminates necessity of frequent operation of lubricant screw • Ample downstream (sealing end) lubrication • Reduces friction — valve turns easily • Reduces wear and extends life of valve

2. **FULL-PORT SEALING GROOVES** — Sealing grooves encircle ports — assures complete uniform seal • Provides a dependable seal against high pressures, liquid or gas • Full-Port Lubrication thoroughly lubricates core—valve operates easily • Reduces washouts • Reduces wear and extends life of valve

3. **WEDGE-PROOF SUPER-SURFACED CORE**—Cylindrical Core positively cannot wedge—permits easy turning • Perfect fit of core to body conserves lubricant and maintains leakproof seal longer • Lubricant lasts longer . . . saves time . . . saves valves • Super-Surfaced core provides extra resistance to abrasives and corrosion agents • Reduces wear — lasts longer

4. **SEALING GROOVES ON CORE** — Never exposed to fluid • Prevent loss of lubricant into fluid line . . . insures constant seal • Protects sealing grooves on core from direct cutting action of fluid • Lessens intrusion of abrasives into lubricant sealing grooves . . . reduces wear on vital sealing surfaces • Prolongs life of valve

*When lubricating a Mission Plug Valve, a portion of the lubricant is forced into reservoirs. Thereafter, the line pressure AUTOMATICALLY feeds this stored lubricant, as needed, into the downstream seal grooves. So long as lubricant remains in the reservoir a perfect seal is assured.

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NOTES FOR THE
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Pipe-Layer
TRACKSON COMPANY

Trackson Company, Milwaukee, has announced model MD6 Pipe-Layer—a tractor side crane that mounts on the new "Caterpillar" D6 model and takes full advantage of the increased power, ease of control and other improvements built into the latest "Caterpillar" tractor.

The new Pipe-Layer has a lifting capacity ranging from 7300 pounds at 12 feet overhang, to 23,700 pounds at 4 feet overhang, and is one of a complete line of Trackson pipe-layers available with lifting capacities up to 67,000 pounds.

The tractor side-cranes provide ample power, speed and traction for the strenuous service of cross-country pipe-line construction, the maker claims. They lift, lower, carry and bend pipe . . . have super-high lifting capacities in proportion to their weight . . . can carry loads anywhere at tractor speeds . . . and can operate easily in cramped quarters. Equipped with the Trackson "Anglefiller," the same machine will bulldoze, backfill, level and spread.

Clutch Facings
GATKE CORPORATION

Improved asbestos clutch facings covering the complete range of industrial, as well as automotive service requirements, are announced by Gatke Corporation, 228 N. La Salle Street, Chicago.

Made of different material combinations and various methods of processing to meet operating conditions, these modern clutch facings are furnished in sizes from 14 feet in diameter weighing 1000 pounds and more, to tiny discs weighing less than an ounce.

Gatke Clutch Facings

Gear-toothed clutch facings with integrally moulded teeth and cone type clutch facings, as well as the conventional disc type are available in all shapes and sizes.

Gears

Link-Belt Company, 2045 W. Hunting Park Avenue, Philadelphia, has issued a 52-page catalog and data book, No. 1874, on the Link-Belt P.I.V. Gear variable speed transmission.

Units of ½- to 15-horsepower capacity, with speed ratios of up to 6 to 1 are tabulated, illustrated, described. Speeds, torque ratings, dimensions, weights, and other data are given for all 7 sizes, each available in 5 standard types, horizontal and vertical mountings.

Transformer
IDEAL COMMUTATOR DRESSER COMPANY

A safety device for workmen using electrical extensions in damp, all metal or otherwise hazardous locations is announced by Ideal Commutator Dresser Company, 1525 Park Avenue, Sycamore, Illinois.

It is comprised of a step-down transformer that is easily plugged in between the power supply and the extension to reduce the extension voltage to a harmless 6 volts. Thus, the danger from shock caused by bad sockets or defective extension cords is eliminated.

Transformer has a 10-foot 3-conductor safety type primary cord. Capacity is 50 watts with a 25-foot extension. Longer extensions require proportionately lower watt lamps. Available for 110-volt, 50-60-cycle or 25-cycle A.C. Weight, 4½ pounds (60 cycle), 6¾ pounds (25 cycle). Size only 2⅞ x 3⅞ x 4 inches.

Clarke President, Judd General Manager of Republic Supply Co.

R. J. Wysor, president of Republic Steel Corporation, announces that N. J. Clarke, vice president in charge of sales of Republic Steel Corporation, has been elected president of Republic Supply Company, a wholly owned subsidiary of Republic Steel Corporation. Clark's headquarters will continue to be in Cleveland, Ohio. A. B. Judd, vice president, was elected general manager of Republic Supply Company. The other officers of the company are J. H. Brooks, vice president; J. H. Lollar, Jr., secretary-treasurer; J. P. Lawrence, assistant secretary-treasurer.

Fluor Corporation Makes Second Addition to Plant in Year

The Fluor Corporation, Los Angeles, is constructing more floor space, the second expansion within a year. A 40-foot addition to the office building to provide 1600 square feet for the cooling tower and accounting departments is being built.

To the existing 20,000 square feet of factory space now being used for prefabricating the corporation's aerator type atmospheric and mechanical draft cooling towers, a mill addition 80 feet x 120 feet is under construction to provide 10,000 square feet.

The corporation moved into its new plant one year ago designed to provide for at least 50 percent expansion in all departments. Two months later it was found necessary to add 2400 square feet to the office building.

National Supply to Handle Dresser Line of Products

According to announcement made by A. E. Walker, president, National Supply Company, Pittsburgh, manufacture of Dayton couplings and accessories was discontinued by the Dayton Coupling Division on October 1, 1941. The

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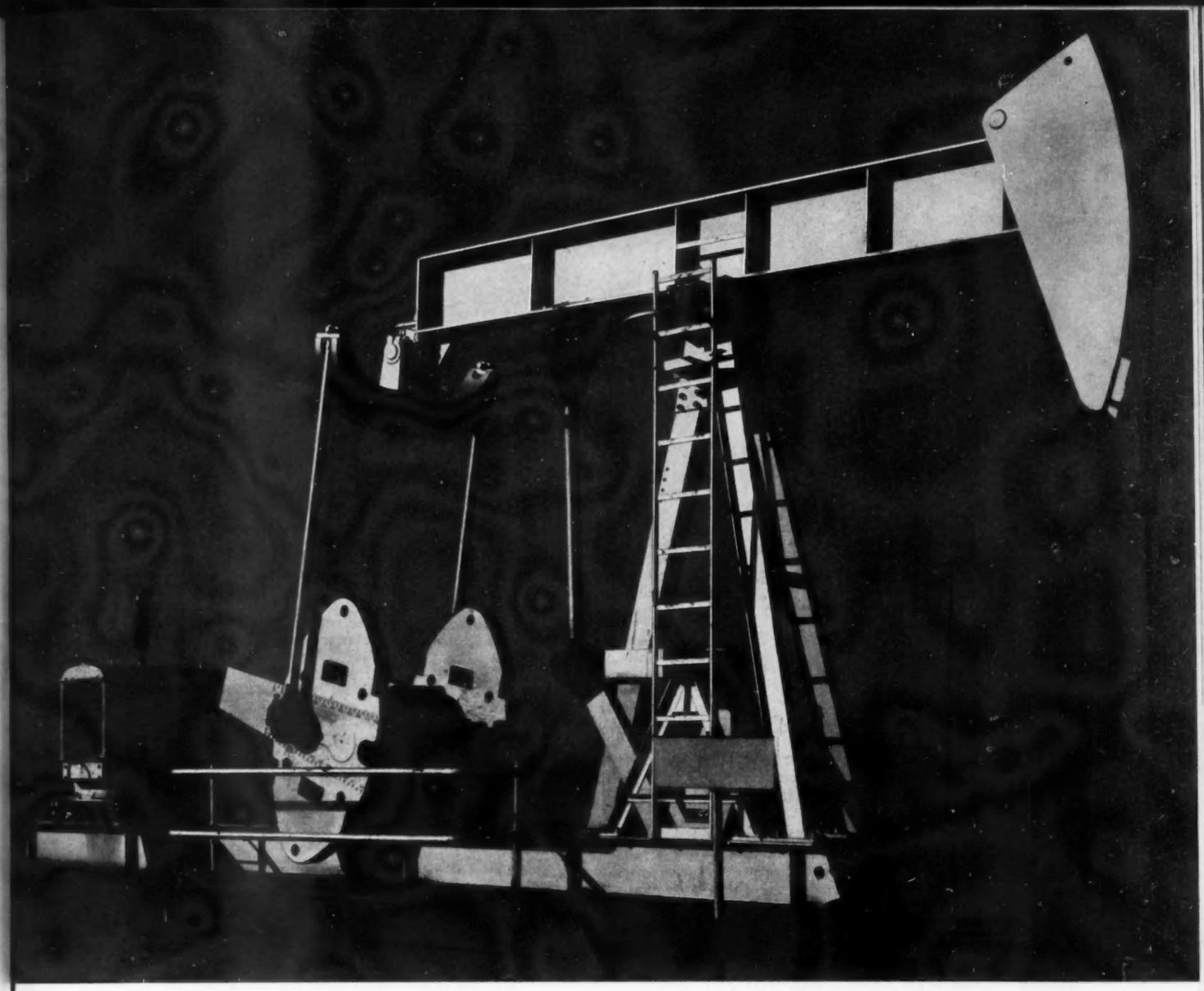

SAE 4140 AGAIN DELIVERS THE PERFORMANCE WHILE CUTTING THE COST

Pumping unit shafts must be able to take a beating without quitting. Well owners have neither time nor money to waste on breakdowns and high maintenance costs.

One well known power unit manufacturer has solved the shaft problem by adopting Chromium-Molybdenum steel (SAE 4140). When properly heat treated, the steel develops the properties, particularly fatigue strength, necessary to carry the alternating loads imposed. In addition the steel is economical not only in first cost but also in fabrication expense.

Send for free booklet, "Molybdenum Steels in Oil Production" for data on Molybdenum Steels that have proved their worth in service.

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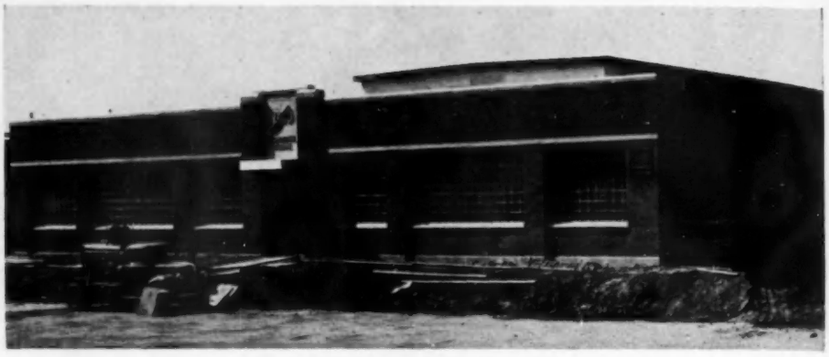

Wico Electric Company's New Engineering Plant

Dayton line includes not only couplings, but fittings, saddles, split repair sleeves, etc.

Concurrent with this announcement is the news that National Supply Company has been appointed by Dresser Manufacturing Company, Bradford, Pa., as a national oil and gas jobber of Dresser products and will henceforth sell Dresser couplings and fittings, repair clamps and sleeves, and extra parts, such as gaskets, bolts, etc.

Replacement parts for Dayton couplings and accessories will be furnished after October 1, 1941, by Dresser, inasmuch as manufacturing equipment, molds for gaskets, patterns, trade names, trade marks, and patents have been sold by Dayton Coupling Division to Dresser Manufacturing Company.

Dresser recently opened a Houston warehouse, 1121 Rothwell Street, to make available ready-made joints overnight for speedy laying of oil lines. Dresser officials state that the new Houston warehouse will assist in meeting the extra demand for Dresser material because of the new arrangements and the increased activity in the gas and oil fields. Stocks sufficient for joining 40 miles of pipe are carried for immediate delivery.

Tulsa Exposition Reports Advance Space Sales at Record

Eight months before opening May 16 to 23, 1942, International Petroleum Exposition reports 85.2 percent of space sold. This is the largest space sale recorded this far in advance since the Exposition was begun in 1923.

Three major committees are at work on plans for the 1942 Tulsa oil show. Hall of Science exhibits dramatizing the role of petroleum in defense efforts are being prepared by the committee under the chairmanship of Dr. Gustav Egloff, director of research, Universal Oil Products Company, Chicago, following a meeting of the group in Tulsa recently.

A safety contest among workers in the major divisions of the petroleum industry is being planned by the Exposition's central safety committee, with workers being contacted by the committee.

Wico Electric Company Builds New Emergency Plant

Activities of Wico Electric Company, Springfield, Massachusetts, in the national defense program are closely allied to its engineering department.

To handle this important work at peak efficiency, a new engineering plant has been built. The plant will contain the company's engineering laboratories as well as the section set aside for defense work. This change will also make available, for manufacturing purposes, much additional space in the main plant.

New quarters are of modern construction. The plant is built of steel, concrete, glass brick and is air conditioned throughout. This participation in the defense program will not interfere with Wico's regular business which consists of manufacturing high-tension magnetos for all phases of industry.

W. L. Somner Company Opens Supply Store in Mississippi

W. L. Somner Company, Shreveport, announces opening of a new store at Tinsley, Mississippi, with complete stocks of Buda engine parts. Gaso pump parts and Evco products. J. A. McKinna will be in charge.

An A.A.P.G. Book (1941)

POSSIBLE FUTURE OIL PROVINCES *of the* UNITED STATES AND CANADA

A symposium conducted by the Research Committee of The American Association of Petroleum Geologists, A. I. Levorsen, chairman. Papers read at the Twenty-sixth Annual Meeting of the Association, at Houston, Texas, April 1, 1941, and reprinted from the Association Bulletin, August, 1941.

●

Edited by A. I. LEVORSEN

●

The purpose of this symposium is to get an over-all picture of the undiscovered oil resources of North America, north of the Rio Grande. Ten geological organizations have participated, to the end that this survey has behind it the authority of many geologists representing state and national geological surveys, large and small oil companies, and consulting and independent geologists. A map and a section of geology, stratigraphy, and structure illustrate each province description.

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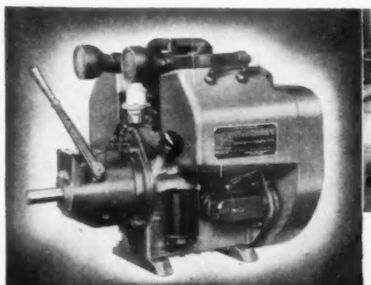

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Ar. El Paso	1:00 P.M.	(M.T.)	— Oct. 31
Lv. El Paso	1:30 P.M.	(M.T.)	— Oct. 31
Ar. Los Angeles	9:30 A.M.		— Nov. 1
Lv. Los Angeles	8:05 P.M.		— Nov. 1
Ar. San Francisco	8:45 A.M.		— Nov. 2

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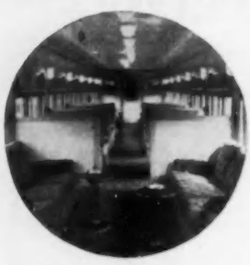
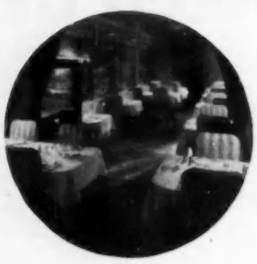


Lounge



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